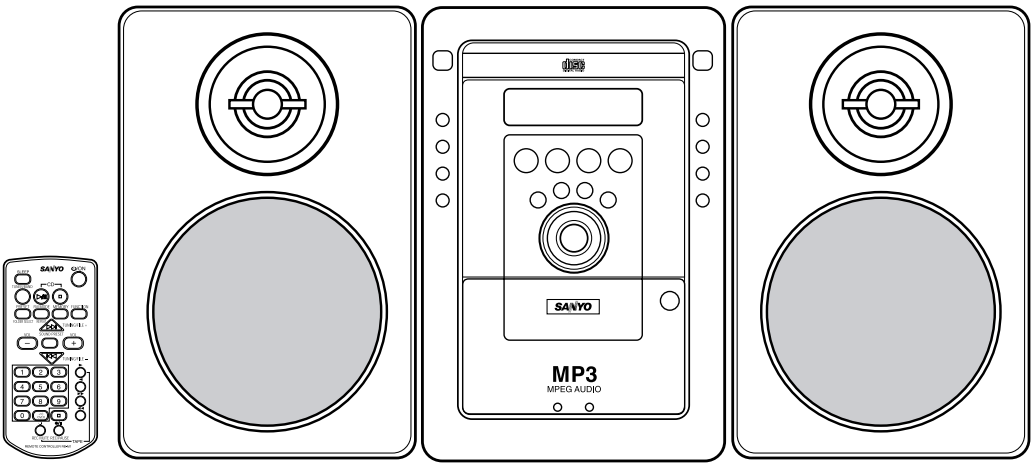
SANYO

FILE NO.

Service Manual Micro Component System DC-MP5500 (XE)



PRODUCT CODE No.
129 652 56

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This service manual consists of "DC-MP5500U/XE" (Main unit : 129 651 56) and " SX-MM5000(SL)/XE" (Speaker system : 165 066 00).

REFERENCE No. SM5810471

LASER BEAM SAFETY PRECAUTION

- Pick-up that emits a laser beam is used in this CD player section.

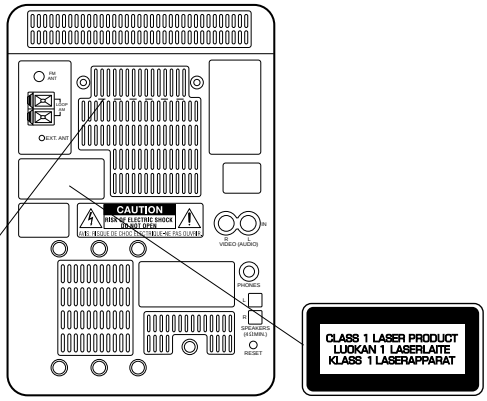
CAUTION :

THIS PRODUCT CONTAINS A LOW POWER LASER DEVICE, TO ENSURE CONTINUED SAFETY DO NOT REMOVE ANY COVERS OR ATTEMPT TO GAIN ACCESS TO THE INSIDE OF THE PRODUCT.
REFER ALL SERVICING TO QUALIFIED PERSONNEL.

LASER OUTPUT ..... 0.6 mW Max. (CW)

WAVELENGTH ..... 790 nm

CAUTION – INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL – USYNLIG LASER STRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION, UNDGÅ UDS ÆTTELSE FOR STRÅLING.
VARNING – OSYNLIG LASER STRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.
VORSICHT – UNSICHTBARE LASERSTRAHLUNG TRITT AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT, DEM STRAHL AUSSETZEN.
VARO – AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.



TAPE ADJUSTMENTS

1. Azimuth Adjustment

- Be sure to clean the heads before attempting to make any adjustment.
- Be sure both channels (1 and 2) are the same level.
  (Using a dual-channel oscilloscope)
- Be sure both channel's waveform are same for the phase matching.
- After completion of the adjustment, use the threadlock (TB-1401B) to secure the azimuth adjustment screws.

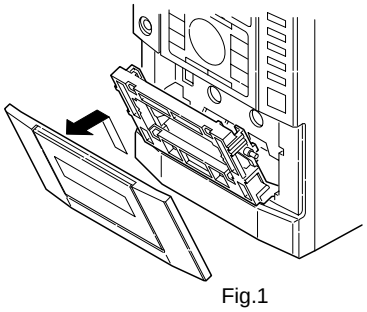


Fig.1

1. Remove the cover deck as Fig.1.
2. Load a test tape (VTT-738 etc. : 10kHz) in the Deck.
3. Press the PLAY button. (Normal playback)
4. Use a + tip screwdriver to turn the screw for normal azimuth adjustment so that the left and right outputs are maximized at the same phase during normal playback. See Fig.2.
5. Press the PLAY button. (Reverse playback)
6. Use a + tip screwdriver to turn the screw for reverse azimuth adjustment so that the left and right outputs are maximized at the same phase during reverse playback.
7. Adjust so that the waveforms for the left and right channels are in alignment.

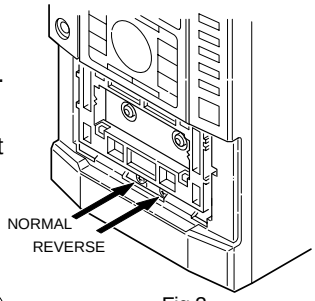


Fig.2

2. Tape Speed Adjustment

- Connect the Frequency Counter to TAPE OUT.

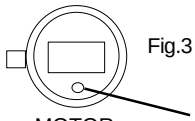


Fig.3

1. Insert the test tape (MTT-111N, etc.; 3,000Hz) into the DECK.
2. Press the PLAY button. .
3. Adjust a hole on the motor bottom so that a frequency counter reading of 3,000 ±5Hz is obtained.See Fig.3.
4. Press the STOP button, and eject the test tape.

3. Torque Measurement

Item	Take-up Torque	Back tention	Pulley tention
Test Cassette	PLAY : TW2111A (FWD) PLAY : TW2121A (REV) F.FWD / REW : TW2231	PLAY : TW2111A (FWD) PLAY : TW2121A (REV)	Driving power cassette : TW-2412 (PLAY) TW-2422(REV. PLAY)
PLAY/REV.	30 ~ 65 grcm	2 ~ 6 grcm	> 50grcm
F.FWD	30 ~ 65 grcm	-	70 ~140 grcm
R E W	70 ~ 140 grcm	-	-

CD PICK-UP MAINTENANCE

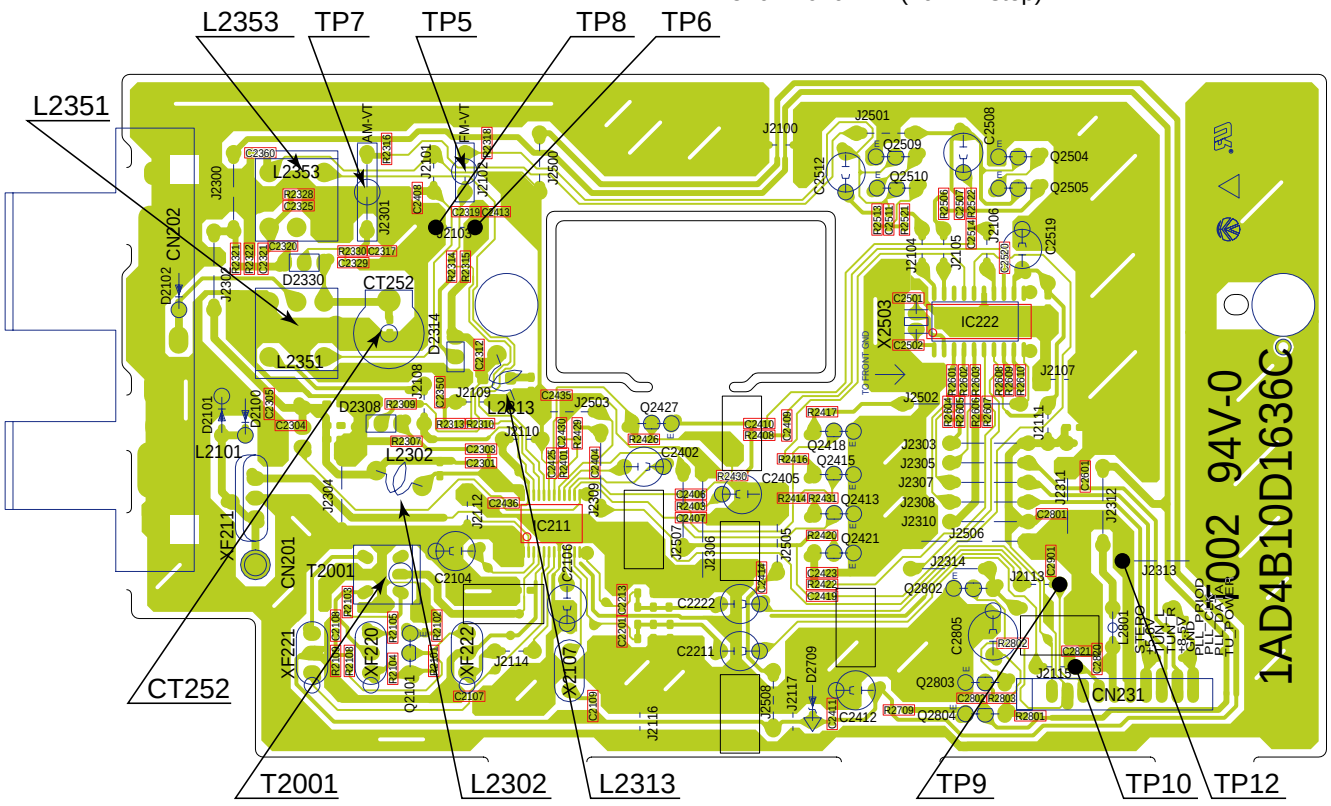
About pick-up (Optical lens) Cleaning

Clean a lens with swab of the cotton which moistened it with alcohol, cleaning paper or cleaning disc appointed. Specified cleaning disc : LC-1 (Part code : 645 026 1961 ..... manufactured by SANYO.) Show a clean procedure in the following in reference by swab of cotton.

1. Cotton swab is wrapped with Cleaning paper.
2. Add the isopropyl alcohol.
3. Gently move the tip of cotton swab just like a draw a whirlpool from inside to outside on the surface of lens.

TUNER ADJUSTMENTS

- Use a plastic screw driver for adjustments.
- MODE : ST (Stereo)
- Speaker impedance : 4 ohms
- TUNING
  FM : 87.5 - 108MHz
  AM : 522 - 1611 kHz (9 kHz step)
  520 - 1610 kHz (10 kHz step)



Antenna : 75Ω unbalanced, Modulation : 1 kHz
Dev. : ±22.5kHz(MONO), ±22.5kHz(STEREO), ±6.75kHz(PILOT)
RF Level : dBuV EMF
Output Level : about 30mV at TP9, TP10, TP12

1. FM

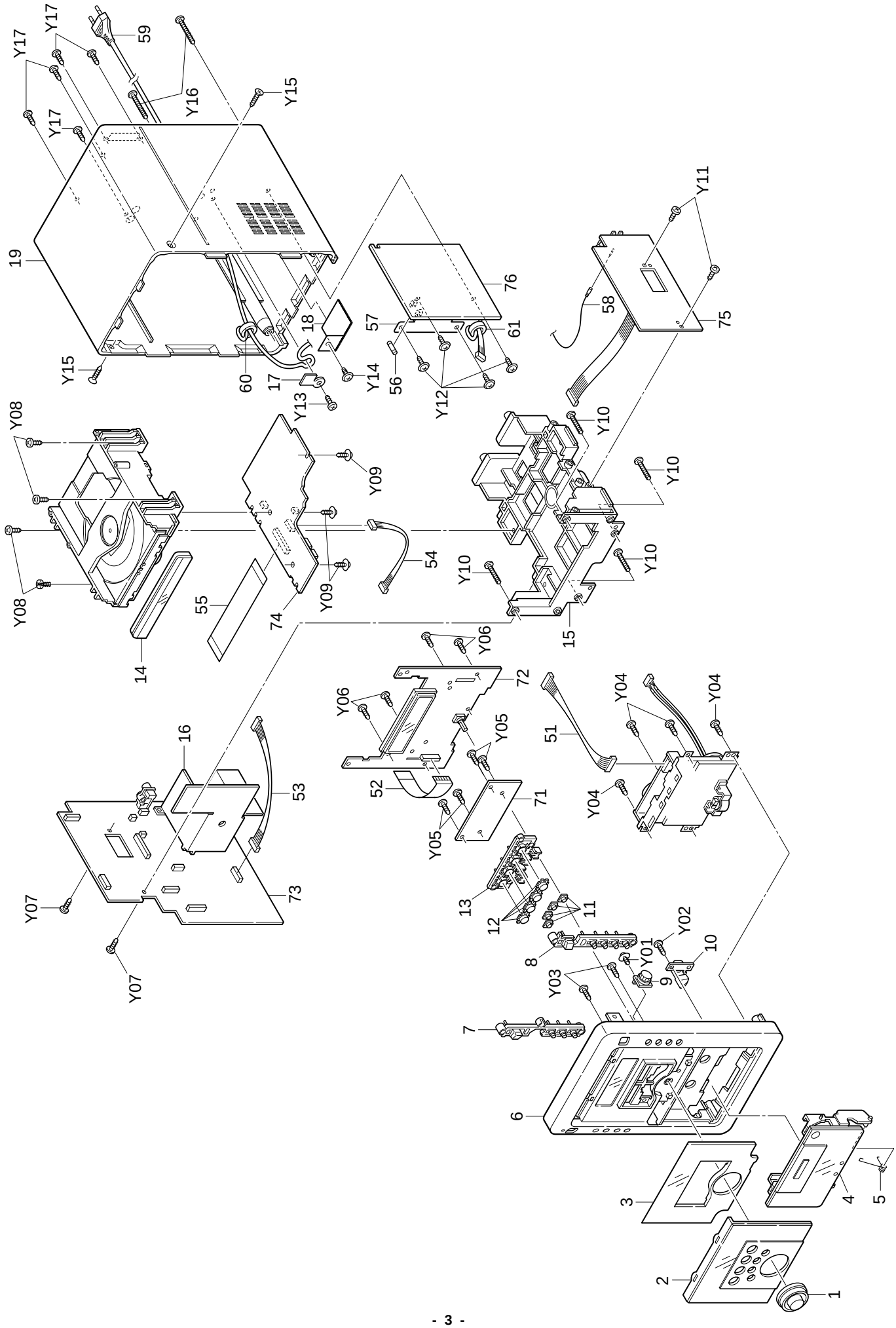
Step	Adjusting Circuit	Connection		SG Frequency	Adjustment	Remark
		Input	Output			
1	Cover	---	TP5 (H)	87.5MHz	L2313	1.00±0.05V
			TP6 (E)	108.0MHz	---	4.80±0.50V Check Only
2	Tracking	FM Antenna	TP9 (L)	90.0MHz	L2302	Maximum
			TP10 (R)			
			TP12 (E)	106.0MHz		

Anntena : IRE Loop(SG), Modulation : 1kHz 30%
RF Level : dBuV EMF
Output Level : about 30mV at TP9, TP10, TP12

2. AM

Step	Adjusting Circuit	Connection		SG Frequency	Adjustment	Remark
		Input	Output			
1	IF Adjustment	Loop Ant	---	450KHz at 999kHz	T2001	Maximum
2	Cover Voltage (AM)	---	TP7 (H)	522kHz	L2353	1.00±0.05V
		---	TP8 (E)	1611kHz		6.70±0.50V Check Only
3	Tracking (AM)	Loop Ant	TP9 (L)	603kHz	L2351	Maximum
			TP10 (R)			
			TP12 (E)	1404kHz	CT252	

EXPLODED VIEW (CABINET & CHASSIS)



PARTS LIST

PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL ⚠ IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATED COMPONENTS IN WHICH SAFETY AND PERFORMANCE CAN BE OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED BY ⚠, USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.
Regular type resistors are less than 1/4 W carbon type and 0 ohm chip resistors.
Regular type capacitors are less than 50 V and less than 1000 μF type of Ceramic type and Electrical type.

N.S.P : Not available as service parts.

PACKING & ACCESSORIES

REF.NO.	PART NO.	DESCRIPTION
	614 328 1511	CARTON CASE
	614 325 3242	CUSHION,REAR
	614 325 3259	CUSHION,FRONT
	614 328 1528	INSTRUCTION MANUAL
	614 328 1535	INSTRUCTION SHEET
	645 046 8322	ASSY,ANTENA,LOOP
or	645 005 1227	ASSY,ANTENA,LOOP
	614 326 4255	LID,BATTERY REMOCON
	645 059 0924	REMOCON,RB-M1
	614 325 2900	ASSY,BOX,SPEAKER(L,R)

CABINET & CHASSIS

REF.NO.	PART NO.	DESCRIPTION
1	614 325 3181	KNOB,VOLUME
2	614 326 1094	ASSY,DEC,PANEL
3	614 326 6273	DEC,WINDOW,INNER
4	614 326 1100	ASSY,LID,CASSETTE
5	614 325 3228	SPRING,LID,CASSETTE
6	614 328 6196	ASSY,PANEL,FRONT
7	614 325 2979	BUTTON,POWER,4 KEY
8	614 325 2993	BUTTON,OPEN,5 KEY
9	614 309 8270	ASSY,GEAR,LID,CASSETTE
10	614 303 1277	LATCH,CAM,DECK,DOOR,LOCKING
11	614 328 1337	DEC,BUTTON,FUNCTION
12	614 328 1344	DEC,BUTTON,FUNCTION
13	614 325 2986	BUTTON,FUNCTION,8 KEY
14	614 328 1306	ASSY,COVER CD,DOOR
15	614 325 3204	MOUNTING,CD
16	614 327 0560	SHIELD
17	614 316 1172	STOPPER
18	614 326 4156	SHIELD
19	614 328 1290	ASSY,CABINET,REAR

FIXING PARTS

REF.NO.	PART NO.	DESCRIPTION
Y01	411 021 3503	SCR S-TPG BIN 3X10, F-PANEL+ASSY,GEAR
Y02	411 021 3503	SCR S-TPG BIN 3X10, F-PANEL+LATCH,CAM
Y03	411 021 3503	SCR S-TPG BIN 3X10, F-PANEL+DEC,WINDOW,FL
Y04	411 021 3503	SCR S-TPG BIN 3X10, F-PANEL+MECHA,DECK
Y05	411 021 3503	SCR S-TPG BIN 3X10, F-PANEL+BUTTON,FUNCTION
Y06	411 021 3503	SCR S-TPG BIN 3X10, F-PANEL+FRONT,PCB
Y07	411 021 3503	SCR S-TPG BIN 3X10, MTG CD+MAIN PCB
Y08	411 021 3503	SCR S-TPG BIN 3X10, MTG CD+CD MECHA
Y09	411 020 9902	SCR S-TPG BRZ+FLG 3X8, MECHA CD+CD PCB
Y10	411 021 4500	SCR S-TPG BIN 3X16, MTG CD+F,PANEL
Y11	411 021 3503	SCR S-TPG BIN 3X10, MTG CD+TU PCB
Y12	411 020 9100	SCR S-TPG BRZ+FLG 3X12, REAR+P-TRANS
Y13	411 021 4005	SCR S-TPG BIN 3X12, REAR+STOPPER
Y14	411 020 9902	SCR S-TPG BRZ+FLG 3X8
Y15	411 098 7800	SCR S-TPG FLT 3X12, MTG CD+C,REAR(L/R)
Y16	411 021 4906	SCR S-TPG BIN 3X20, C-REAR+F-PANEL
Y17	411 021 3404	SCR S-TPG BIN 3X10, MTG CD+C,REAR, C-REAR(ANT TERMINAL), C-REAR+VIDEO IN

ELECTRICAL PARTS

REF.NO.	PART NO.	DESCRIPTION
51	614 326 3746	ASSY,WIRE
52	614 326 3654	FLEXIBLE FLAT CABLE
or	614 327 0867	FLEXIBLE FLAT CABLE
53	614 326 3593	ASSY,WIRE
54	614 326 3586	ASSY,WIRE
55	614 327 0843	FLEXIBLE FLAT CABLE
or	614 326 3630	FLEXIBLE FLAT CABLE
56	⚠423 028 8504	FUSE 250V 3.15A
57	⚠645 063 2198	TRANS,POWER
58	614 274 2013	CORD,ID CONNECTOR,FM ANT
59	⚠645 016 9939	CORD,POWER-1.74MK
60	645 051 0649	CORE,FERRITE,FOR CORD POWER
or	645 031 7637	CORE,FERRITE,FOR CORD POWER
61	645 042 8999	CORE,FERRITE, FOR SECOND POWER WIRE
or	645 051 0656	CORE,FERRITE, FOR SECOND POWER WIRE
	645 051 0649	CORE,FERRITE,FOR CN135
or	645 031 7637	CORE,FERRITE,FOR CN135

SWITCH P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
71	614 328 0781	ASSY,PWB,SW (Only Initial)
CN641	614 327 7583	ASSY,WIRE,SW-FRONT
S6401	645 006 5958	SWITCH,PUSH 1P-1T
or	645 037 2759	SWITCH,PUSH
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6402	645 006 5958	SWITCH,PUSH 1P-1T
or	645 037 2759	SWITCH,PUSH
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6403	645 006 5958	SWITCH,PUSH 1P-1T
or	645 037 2759	SWITCH,PUSH
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6404	645 006 5958	SWITCH,PUSH 1P-1T
or	645 037 2759	SWITCH,PUSH
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
S6406	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6407	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6408	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6409	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT

FRONT P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
72	614 328 0774	ASSY,PWB,FRONT (Only Initial)
BR601	614 325 4249	HOLDER,FL
BR602	614 325 4256	HOLDER,LED
BR603	614 325 4256	HOLDER,LED
CN611	645 012 5201	SOCKET,FPC 16P,FRONT-MCU
D6010	407 012 4406	DIODE 1SS133
D6011	407 012 4406	DIODE 1SS133
D6301	407 231 3808	LED LT2P11-81,STANDBY-LED
D6302	407 231 7905	LED BLUE LT6EB3-81-SBE1, PANEL-LED
D6303	407 231 7905	LED BLUE LT6EB3-81-SBE1, PANEL-LED
FL601	645 054 9724	FLOURESCENT TUBE
IC601	409 519 6907	IC PT6315
L6010	645 001 5441	INDUCTOR,2.2U K
Q6301	405 143 0007	TR KRC107M
or	405 000 3806	TR DTC114YS
Q6302	405 143 0007	TR KRC107M
or	405 000 3806	TR DTC114YS
Q6303	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
S6001	645 057 4689	SWITCH,ROTARY(ENCODER)
S6110	645 006 5958	SWITCH,PUSH 1P-1T
or	645 037 2759	SWITCH,PUSH
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6111	645 006 5958	SWITCH,PUSH 1P-1T
or	645 037 2759	SWITCH,PUSH
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6112	645 006 5958	SWITCH,PUSH 1P-1T
or	645 037 2759	SWITCH,PUSH
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6113	645 006 5958	SWITCH,PUSH 1P-1T
or	645 037 2759	SWITCH,PUSH
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6114	645 006 5958	SWITCH,PUSH 1P-1T
or	645 037 2759	SWITCH,PUSH
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6115	645 006 5958	SWITCH,PUSH 1P-1T
or	645 037 2759	SWITCH,PUSH
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6116	645 006 5958	SWITCH,PUSH 1P-1T
or	645 037 2759	SWITCH,PUSH
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6117	645 006 5958	SWITCH,PUSH 1P-1T
or	645 037 2759	SWITCH,PUSH
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
S6118	645 006 5958	SWITCH,PUSH 1P-1T
or	645 037 2759	SWITCH,PUSH
or	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT

REF.NO.	PART NO.	DESCRIPTION
SE651	407 229 6101	PHOTO DIODE SPS-442-1-G1
or	407 217 1101	PHOTO DIODE SPS-442-1G

AMPLIFIER & MCU P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
73	614 328 0743	ASSY,PWB,AMP-MCU (Only Initial)
C4315	403 329 3309	ELECT 2200U M 25V
C4316	403 332 7400	ELECT 2200U M 50V
C4601	403 057 3503	POLYESTER 0.1U K 50V
C4605	403 385 5705	POLYESTER 0.039U J 50V
or	403 061 3605	POLYESTER 0.039U J 50V
C4606	403 385 5804	POLYESTER 4700P J 50V
or	403 061 7702	POLYESTER 4700P J 50V
C4607	403 377 6307	POLYESTER 1000P J 50V
or	403 056 7502	POLYESTER 1000P J 50V
C4608	403 060 2807	POLYESTER 0.027U K 50V
C4626	403 377 1708	ELECT 47U M 63V
or	403 378 7600	ELECT 47U M 63V
or	403 377 1807	ELECT 47U M 63V
C4627	403 377 1708	ELECT 47U M 63V
or	403 378 7600	ELECT 47U M 63V
or	403 377 1807	ELECT 47U M 63V
C4727	403 259 0508	NP-ELECT 1U M 50V
C4743	403 057 3503	POLYESTER 0.1U K 50V
C4827	403 259 0508	NP-ELECT 1U M 50V
C4843	403 057 3503	POLYESTER 0.1U K 50V
CN440	614 310 2472	PLUG,6P
or	645 005 8127	PLUG,6P
CN441	614 310 2793	PLUG,8P
or	645 004 2942	PLUG,8P
CN455	614 310 2472	PLUG,6P
or	645 005 8127	PLUG,6P
CN456	645 006 1875	PLUG,2P,SPEAKER
CN457	645 006 1875	PLUG,2P,SPEAKER
CN460	645 055 1017	JACK,PHONE D3.6,HEADPHONE
or	645 011 6384	JACK,PHONE D3.6,HEADPHONE
CN470	614 276 6835	SOCKET,JACK
CN651	614 310 2663	PLUG,10P
or	645 006 0977	PLUG,10P
CN652	614 310 2519	PLUG,10P
or	645 005 8158	PLUG,10P
CN653	645 012 5201	SOCKET,FPC 16P,MAIN-FRONT
CN654	645 012 5300	SOCKET,FPC 26P
CN655	614 310 2496	PLUG,8P
or	645 005 8134	PLUG,8P
D4320	⚠ 407 099 6003	ZENER DIODE MTZJ9.1B
D4330	407 099 6805	ZENER DIODE MTZJ13B
D4331	407 012 4406	DIODE 1SS133
D4332	407 012 4406	DIODE 1SS133
D4340	407 148 6701	DIODE 1A3-I
D4341	407 012 4406	DIODE 1SS133
D4344	407 012 4406	DIODE 1SS133
D4352	407 099 5204	ZENER DIODE MTZJ5.1B
D4353	407 148 6701	DIODE 1A3-I
D4391	407 012 4406	DIODE 1SS133
D4392	407 012 4406	DIODE 1SS133
D4393	407 099 6805	ZENER DIODE MTZJ13B
D4425	407 099 4801	ZENER DIODE MTZJ4.3B
D4620	407 099 5204	ZENER DIODE MTZJ5.1B
D4624	407 012 4406	DIODE 1SS133
D4625	407 012 4406	DIODE 1SS133
D4626	407 012 4406	DIODE 1SS133
D4627	407 012 4406	DIODE 1SS133
D4628	⚠ 407 099 9509	ZENER DIODE MTZJ30B
D4998	407 012 4406	DIODE 1SS133
D6501	407 012 4406	DIODE 1SS133
D6502	407 012 4406	DIODE 1SS133
D6503	407 012 4406	DIODE 1SS133
D6504	407 012 4406	DIODE 1SS133
D6701	407 012 4406	DIODE 1SS133
HS401	614 325 3167	HEAT SINK

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
HS434	614 324 7166	HEAT SINK
IC434	⚠ 409 463 6701	IC KIA7805API
IC440	409 451 7406	IC AN7348K
IC441	⚠ 410 468 0809	IC TC9422F
IC442	⚠ 409 441 6402	IC TDA7265
IC443	409 189 3404	IC BA7755A
IC651	410 492 0103	IC ASSY(IC TMP87EP26-1J15)
L4600	645 006 1523	INDUCTOR,470U J
L4601	645 006 1523	INDUCTOR,470U J
L4602	645 037 2858	CORE,PIPE
L4603	645 006 1523	INDUCTOR,470U J
L4604	645 037 2858	CORE,PIPE
L4781	645 002 1459	INDUCTOR,22U K
L4881	645 002 1459	INDUCTOR,22U K
L4882	645 002 1459	INDUCTOR,22U K,AMP
L6501	645 001 4581	INDUCTOR,100U K
or	645 031 7842	INDUCTOR,100U K
L6502	645 001 4581	INDUCTOR,100U K
or	645 031 7842	INDUCTOR,100U K
L6503	645 001 4581	INDUCTOR,100U K
or	645 031 7842	INDUCTOR,100U K
PR432	⚠ 645 042 2621	PROTECTOR,1.5A 125V
PR433	⚠ 645 042 2614	PROTECTOR,1A 125V
PR435	⚠ 645 042 2560	PROTECTOR,0.75A 125V
Q4320	405 141 3505	TR KTA1266-Y
or	405 141 3406	TR KTA1266-GR
or	405 004 4502	TR 2SA608-F-NP
or	405 004 5004	TR 2SA608-G-NP
Q4321	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4322	⚠ 405 138 6403	TR KTD2058Y
or	⚠ 405 095 1602	TR 2SD2061-E
or	⚠ 405 095 1701	TR 2SD2061-F
Q4330	405 141 3505	TR KTA1266-Y
or	405 141 3406	TR KTA1266-GR
or	405 004 4502	TR 2SA608-F-NP
or	405 004 5004	TR 2SA608-G-NP
Q4331	⚠ 405 138 6403	TR KTD2058Y
or	⚠ 405 095 1602	TR 2SD2061-E
or	⚠ 405 095 1701	TR 2SD2061-F
Q4350	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4351	405 141 3505	TR KTA1266-Y
or	405 141 3406	TR KTA1266-GR
or	405 004 4502	TR 2SA608-F-NP
or	405 004 5004	TR 2SA608-G-NP
Q4352	⚠ 405 138 6403	TR KTD2058Y
or	⚠ 405 095 1602	TR 2SD2061-E
or	⚠ 405 095 1701	TR 2SD2061-F
Q4391	405 143 0007	TR KRC107M
or	405 000 3806	TR DTC114YS
Q4392	405 143 0007	TR KRC107M
or	405 000 3806	TR DTC114YS
Q4393	405 110 5400	TR KRA102M-A
or	405 000 0508	TR DTA114ES
Q4394	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4395	405 141 3109	TR KTC3203-Y
or	405 024 9907	TR 2SD734-F
or	405 025 0200	TR 2SD734-G
Q4422	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4425	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP

REF.NO.	PART NO.	DESCRIPTION
Q4600	405 141 3703	TR KTA1271-Y
or	405 008 2405	TR 2SB698-F
or	405 008 2504	TR 2SB698-G
Q4601	405 143 0007	TR KRC107M
or	405 000 3806	TR DTC114YS
Q4602	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4603	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4604	405 143 0007	TR KRC107M
or	405 000 3806	TR DTC114YS
Q4700	405 143 9000	TR KRC106M
or	405 075 8607	TR DTC143ZS
Q4800	405 143 9000	TR KRC106M
or	405 075 8607	TR DTC143ZS
Q6501	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q6502	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q6701	405 155 0002	TR MPSA56
Q6702	405 155 0002	TR MPSA56
Q6703	405 155 0002	TR MPSA56
Q6704	405 143 0007	TR KRC107M
or	405 000 3806	TR DTC114YS
Q6705	405 143 0007	TR KRC107M
or	405 000 3806	TR DTC114YS
R4623	⚠ 402 081 1004	FUSIBLE RES 10 JA 1/4W
R4743	402 071 1304	FUSIBLE RES 2.2 JA 1/4W
R4843	402 071 1304	FUSIBLE RES 2.2 JA 1/4W
RY441	614 224 4531	RELAY
S4901	614 215 9828	SWITCH,TACT
S1003	614 326 7386	SHIELD,PLATE,FOR AMP PWB
SA401	411 021 6405	SCR S-TPG BIN 3X8
SA402	411 021 6405	SCR S-TPG BIN 3X8
SA403	411 021 6405	SCR S-TPG BIN 3X8
SA404	411 021 6405	SCR S-TPG BIN 3X8
SA405	411 021 6405	SCR S-TPG BIN 3X8
SA406	411 021 6405	SCR S-TPG BIN 3X8
SA434	411 021 6405	SCR S-TPG BIN 3X8
X6501	645 063 9791	OSC,CRYSTAL 7.372800MHZ
X6502	645 059 0962	OSC,CRYSTAL 32.768KHZ

CD & MPEG P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
74	614 328 0798	ASSY,PWB,CD-MPEG (Only Initial)
CN111	645 042 5349	SOCKET,FPC 16P
CN113	614 310 2625	PLUG,6P
or	645 006 0939	PLUG,6P
CN114	614 310 2618	PLUG,5P
or	645 006 0922	PLUG,5P
CN130	645 059 6582	SOCKET,FFC 26P
or	645 012 5591	SOCKET,FPC 26P
CN140	614 310 2472	PLUG,6P
or	645 005 8127	PLUG,6P
CN180	645 060 2085	SOCKET,IC 32P,FOR IC180
D1011	⚠ 407 177 5300	DIODE RL153-M13
D1012	⚠ 407 177 5300	DIODE RL153-M13
D1530	407 099 5105	ZENER DIODE MTZJ4.7B
D1611	407 127 3806	ZENER DIODE MTZJ3.3B
D1612	⚠ 407 148 6701	DIODE 1A3-I
D1613	⚠ 407 148 6701	DIODE 1A3-I
D1737	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
IC110	410 468 0205	IC TA2153FN,RFAMP
IC120	410 468 0304	IC TC9462F,CDDSP
IC121	410 472 2509	IC TC74HC14AFN-EL, HEXINVERTER
IC130	410 468 0403	IC TA2092N,SERVODRIVER
IC150	409 408 1303	IC LB1641L
IC160	⚠ 409 540 2305	IC ES3210FM,VCDPROCESSOR
IC170	409 540 2404	IC ES3207FP,VCDCOMPANION
IC177	409 039 9204	IC NJM78L05A
IC180	⚠ 410 492 0202	IC ASSY,EEPROM (IC MX29F002TPC-70)
IC190	409 447 3702	IC T224162B-35S,DRAM4M
or	409 447 3702	IC T224162B-35S,DRAM4M
or	410 388 4505	IC M11B416256A-35T,DRAM4M
L1010	645 006 3886	INDUCTOR,1U K
L1131	645 001 5519	INDUCTOR,47U K
L1132	645 001 4550	INDUCTOR,10U K
L1701	645 001 4581	INDUCTOR,100U K
L1702	645 001 5465	INDUCTOR,3.3U K
L1711	645 001 4581	INDUCTOR,100U K
Q1131	405 008 7202	TR 2SB810-E
or	405 008 7301	TR 2SB810-F
or	405 008 6809	TR 2SB808-F-SPA
Q1611	405 141 3109	TR KTC3203-Y
or	405 024 9907	TR 2SD734-F
or	405 025 0200	TR 2SD734-G
Q1715	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q1725	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q1770	405 141 3505	TR KTA1266-Y
or	405 141 3406	TR KTA1266-GR
or	405 004 4502	TR 2SA608-F-NP
Q1771	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
R1530	⚠ 402 083 3600	RESISTOR 15 J- 2W
S1001	614 328 0941	SHIELD,PLATE,FOR CD PWB
S1002	614 328 0958	SHIELD,PLATE,FOR MOUNTING
X1451	645 059 0948	OSC,CRYSTAL 16.9344MHZ
X1701	645 059 0955	OSC,CRYSTAL 27.000MHZ,27MHZ
L2353	645 058 8822	TRANS,OSC,796KHZ
or	645 040 2739	TRANS,OSC,796KHZ
L2801	645 001 4581	INDUCTOR,100U K
LG201	614 129 9082	LUG,C2806
Q2101	405 151 4806	TR KTC3195-O
or	405 151 4301	TR KTC3195-Y
Q2413	405 151 4806	TR KTC3195-O
or	405 151 4301	TR KTC3195-Y
Q2415	405 151 4806	TR KTC3195-O
or	405 151 4301	TR KTC3195-Y
Q2418	405 151 4806	TR KTC3195-O
or	405 151 4301	TR KTC3195-Y
Q2421	405 151 4806	TR KTC3195-O
or	405 151 4301	TR KTC3195-Y
Q2427	405 151 4806	TR KTC3195-O
or	405 151 4301	TR KTC3195-Y
Q2504	405 151 4806	TR KTC3195-O
or	405 151 4301	TR KTC3195-Y
Q2505	405 151 4806	TR KTC3195-O
or	405 151 4301	TR KTC3195-Y
Q2509	405 151 4806	TR KTC3195-O
or	405 151 4301	TR KTC3195-Y
Q2510	405 151 4806	TR KTC3195-O
or	405 151 4301	TR KTC3195-Y
Q2802	405 143 0007	TR KRC107M
or	405 000 3806	TR DTC114YS
Q2803	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q2804	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
T2001	645 043 0213	FILTER,450KHZ
X2107	645 061 3449	CERAMIC FILTER 10.7MHZ
X2503	645 023 4965	OSC,CRYSTAL 7.2MHZ
XF211	614 252 1045	FILTER,LC
or	645 026 2975	FILTER,BP 108MHZ
XF220	645 010 0079	CERAMIC FILTER 10.70MHZ
or	645 010 7665	CERAMIC FILTER 10.70MHZ
or	614 240 2917	FILTER,CERAM
XF221	645 041 9324	CERAMIC FILTER 450KHZ
XF222	645 010 0079	CERAMIC FILTER 10.70MHZ
or	645 010 7665	CERAMIC FILTER 10.70MHZ
or	614 240 2917	FILTER,CERAM

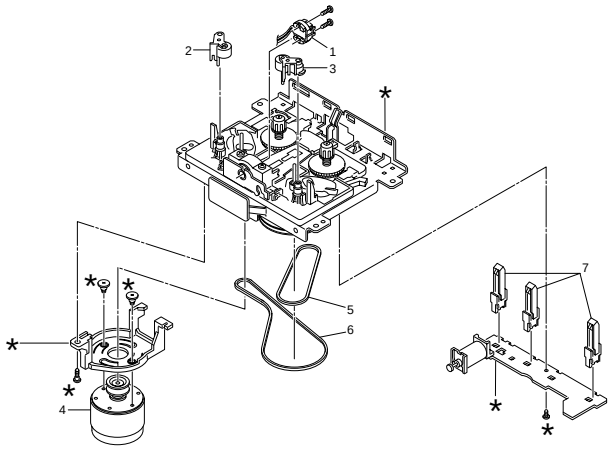
TUNER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
75	614 328 0767	ASSY,PWB,TUNER (Only Initial)
CN201	614 221 8273	TERMINAL
CN202	645 025 4703	TERMINAL,ANTENNA
or	645 038 7715	TERMINAL
CN231	645 012 2750	SOCKET,DIP 10P
CN232	614 326 3616	ASSY,WIRE,TUNER-MAIN
CT252	645 032 5663	TRIMMER,7PF
D2100	407 012 4406	DIODE 1SS133
D2101	407 012 4406	DIODE 1SS133
D2102	407 012 4406	DIODE 1SS133
D2308	407 157 8109	VARACTOR DI SVC211-B
D2314	407 157 8109	VARACTOR DI SVC211-B
D2330	407 105 1305	VARACTOR DI SVC342L-V
or	407 105 1602	VARACTOR DI SVC342M-V
D2709	407 099 4801	ZENER DIODE MTZJ4.3B
IC211	410 468 0601	IC TA2149BFN
IC222	410 468 0700	IC TC9257F
L2101	645 036 7328	COIL,AIR
L2302	645 062 5633	INDUCTOR,AIR
L2313	645 040 2746	COIL,AIR —
L2351	645 058 8792	TRANS,ANT,796KHZ
or	645 037 2377	TRANS,ANT,796KHZ

POWER TRANSFORMER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
76	614 328 0750	ASSY,PWB,PT (Only Initial)
CN411	⚠ 614 017 8203	TERMINAL BOARD
CN412	⚠ 614 017 8203	TERMINAL BOARD
CN416	645 006 4760	HOLDER,FUSE
or	645 031 7903	HOLDER,FUSE
CN417	645 006 4760	HOLDER,FUSE
or	645 031 7903	HOLDER,FUSE
CN418	614 310 2793	PLUG,8P
or	645 004 2942	PLUG,8P
D4110	⚠ 407 196 5800	DIODE 1N5402BD82
D4111	⚠ 407 196 5800	DIODE 1N5402BD82
D4112	⚠ 407 196 5800	DIODE 1N5402BD82
D4113	⚠ 407 196 5800	DIODE 1N5402BD82
D4114	⚠ 407 098 3300	DIODE RL153-BF-S2
D4155	407 148 6701	DIODE 1A3-I
D4156	407 148 6701	DIODE 1A3-I
D4157	407 148 6701	DIODE 1A3-I
D4158	407 148 6701	DIODE 1A3-I
L4191	⚠ 645 038 6053	INDUCTOR,181U
or	⚠ 645 041 3087	INDUCTOR,180U
PR410	⚠ 645 042 2669	PROTECTOR,2A 125V
PR411	⚠ 645 042 2621	PROTECTOR,1.5A 125V
PR412	⚠ 645 042 2560	PROTECTOR,0.75A 125V

EXPLODED VIEW & PARTS LIST (TAPE MECHANISM)

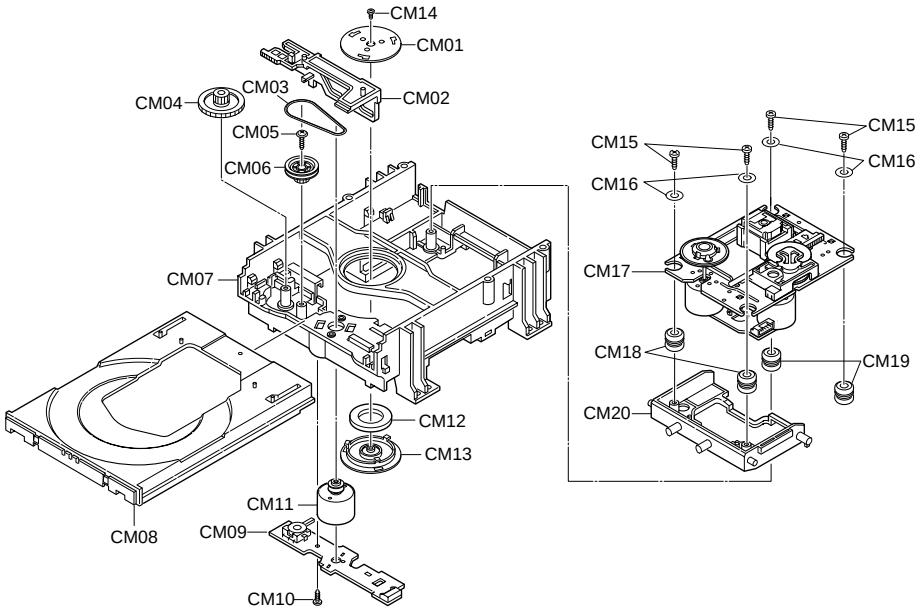


TAPE MECHANISM

REF.NO.	PART NO.	DESCRIPTION
	614 315 4839	ASSY,MECHA,TM-DA370TN-SH,1
1	645 045 1799	R/P HEAD KC-9142EA-0321
2	645 010 9454	PINCH ROLLER(R) ASSY
3	645 010 9447	PINCH ROLLER(F) ASSY
4	645 045 1751	ASSY,MOTOR
5	645 045 1959	RF BELT
6	645 045 1997	MAIN BELT
7	645 045 2048	DETECT SWITCH MXS01190

* N.S.P : Not supplied as service parts.

EXPLODED VIEW & PARTS LIST (CD MECHANISM)



CD MECHANISM

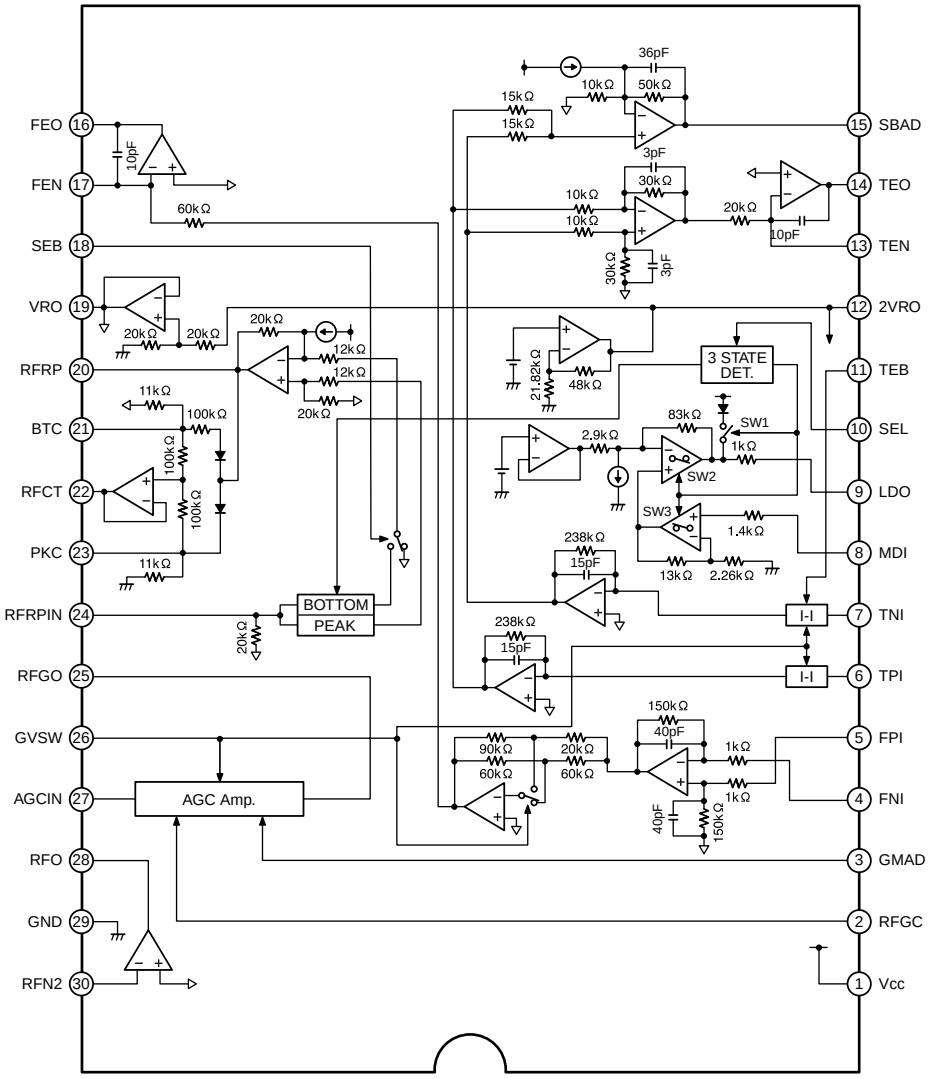
REF.NO.	PART NO.	DESCRIPTION
	614 325 7462	ASSY,MECHA,CD-MM5000-SH, CD MECHA
CM01	614 233 0227	PLATE,BACK YOKE
CM02	614 320 2356	SLIDE,BASE UP/DOWN
CM03	614 323 3923	BELT,SQUARE,LOADING
CM04	614 320 2271	GEAR,LOADING
or	614 324 5230	GEAR,LOADING
CM05	412 061 7803	SPECIAL SCREW,PULLEY FIX
CM06	614 320 2349	PULLEY,LOADING RETARD
CM07	614 326 4811	CHASSIS,MECHA
CM08	614 320 2363	TRAY
CM10	411 021 2704	SCR S-TPG BIN 2.6X6, PWB PWB MECHA IF FIX
CM11	645 032 4352	ASSY,MOTOR LOADING
CM12	645 057 8618	MAGNET,CHUCK
or	614 262 8928	MAGNET,CHUCK
CM13	614 318 9398	HOLDER,CHUCK
CM14	411 162 1901	SCR S-TPG PAN PCS 2X3, CHUCK HOLDER FIX
CM15	411 021 1806	SCR S-TPG BIN 2.6X10,BASE FIX
CM16	411 092 0906	WASHER Z 2.6X10X0.5,BASE FIX
CM17	614 325 6014	ASSY,MECHA,DA11T3CN-SASH, BASE MECHA
CM18	614 324 3113	SPACER,MECHA(FRONT)
or	614 310 6128	SPACER,MECHA(FRONT)
CM19	614 323 6498	SPACER,MECHA(REAR)
or	614 322 9070	SPACER,MECHA(REAR)
CM20	614 325 8391	MOUNTING,BASE MECHA

MECHA SWITCH P.W.BOARD ASSY

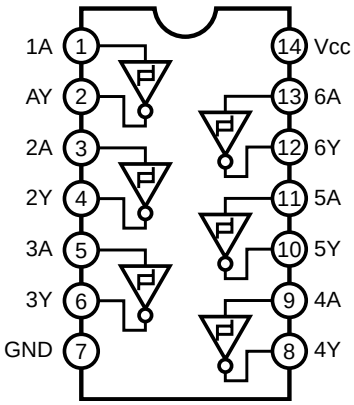
REF.NO.	PART NO.	DESCRIPTION
CM09	614 320 2219	ASSY,PWB MECHA SW, MOTOR & SW PWB (Only Initial)
CN001	614 310 2618	PLUG,5P, MOTOR & SW PWB CONNE
or	645 006 0922	PLUG,5P, MOTOR & SW PWB CONNE
S0001	645 057 5785	SWITCH,LEVER,MECHA SW

IC BLOCK DIAGRAM & DESCRIPTION

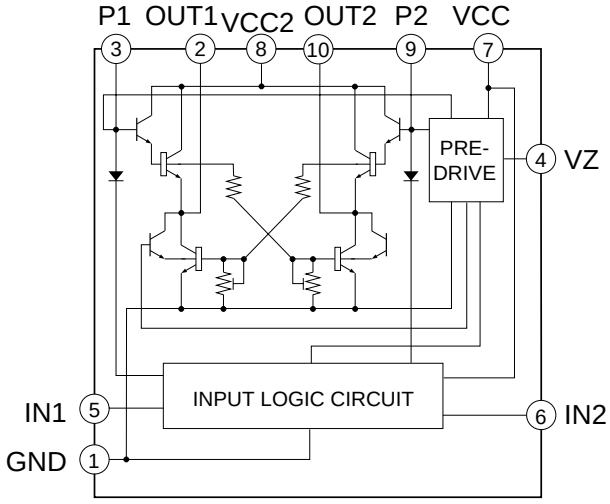
IC110 TA2153FN (RF Amp)



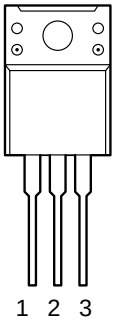
IC121 TC74HC14AFN-EL (HEX Schmitt Inverter)



IC150 LB1641L (Bidirectional Motor Driver)



IC434 KIA7805API (Regulator)

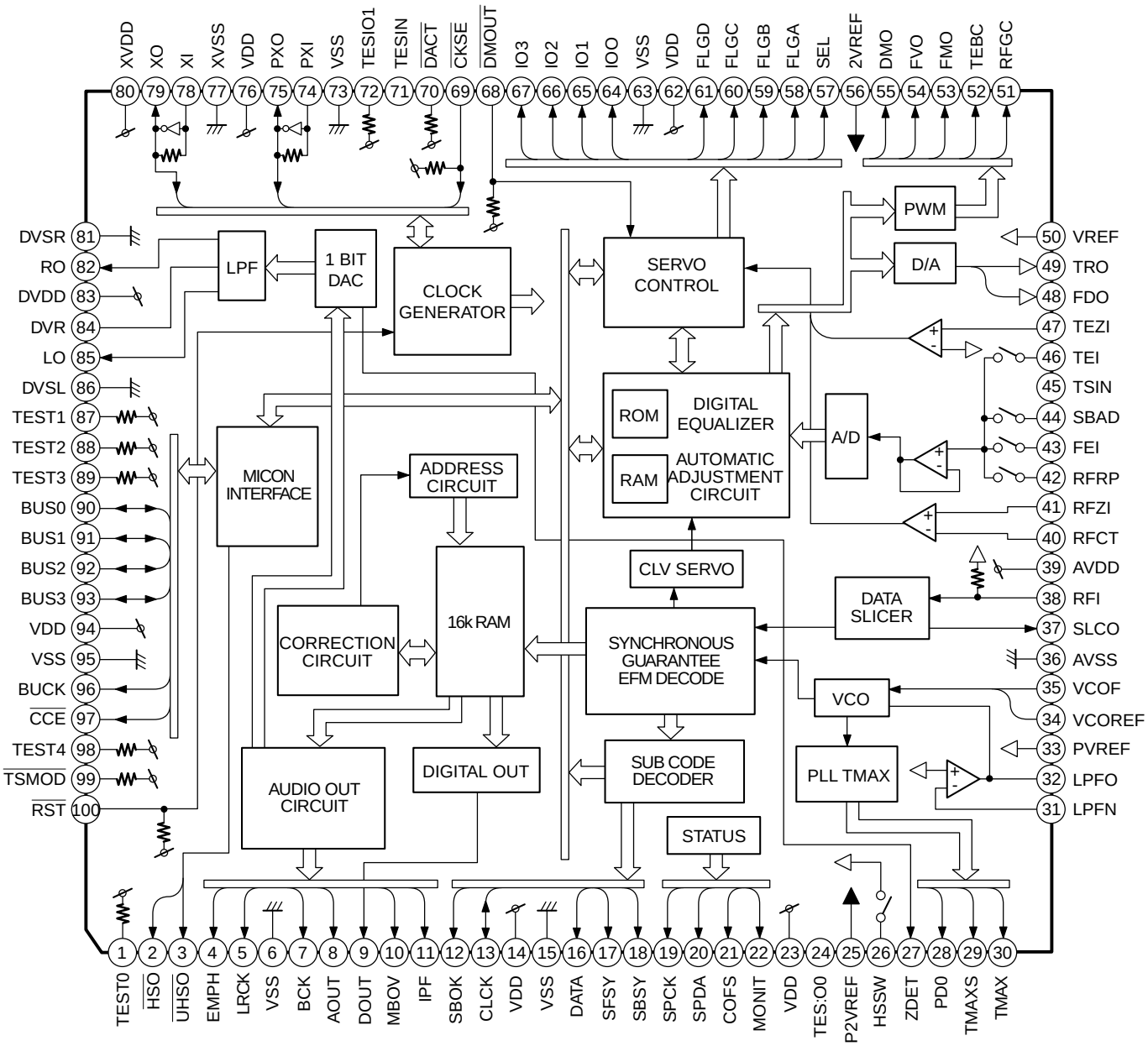


1. INPUT
2. COMMON
3. OUTPUT

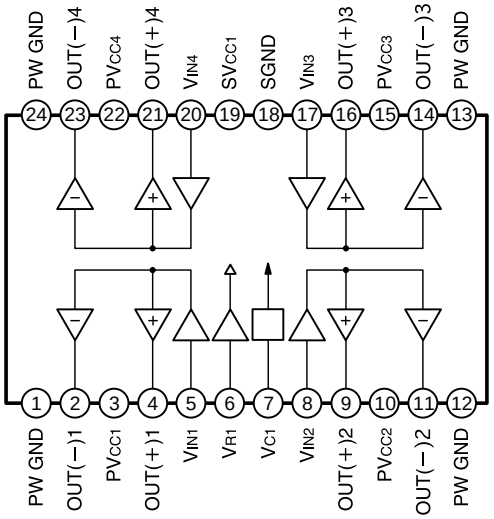
Input		Output		Action
IN1	IN2	OUT1	OUT2	
0	0	0	0	Brake
1	0	1	0	Normal(Reverse)Rotary
0	1	0	1	Reverse(Normal)Rotary
1	1	0	0	Brake

IC BLOCK DIAGRAM & DESCRIPTION

IC120 TC9462F (Digital Servo Processor)



IC130 TA2092N (Power Driver IC for CD Player)


PW GND OUT(−)4 PVCC4 OUT(+)4 VIN4 SVCC1 SGND VIN3 OUT(+)3 PVCC3 OUT(−)3 PW GND
24 23 22 21 20 19 18 17 16 15 14 13
1 2 3 4 5 6 7 8 9 10 11 12
PW GND OUT(−)1 PVCC1 OUT(+)1 VIN1 VR1 VC1 VIN2 OUT(+)2 PVCC2 OUT(−)2 PW GND

TERMINAL NO.	SYMBOL	FUNCTION	TERMINAL NO.	SYMBOL	FUNCTION
1	PW GND	Power GND • Connected to substrate. • ①,⑫,⑬,㉔pin are connected inside.	8	V_{IN2}	Input for CH2
			9	OUT(+)2	Non-inverted output for CH2
			10	PV_{CC2}	Supply terminal of output stage for CH2
2	OUT(-)1	Inverted output for CH1	11	OUT(-)2	Inverted output for CH2
3	PV_{CC1}	Supply terminal of output stage for CH1 • Supply terminal of output stage are not connected to other channel terminal.	12	PW GND	Power GND
			13	PW GND	Power GND
			14	OUT(-)3	Inverted output for CH3
4	OUT(+)1	Non-inverted output for CH1	15	PV_{CC3}	Supply terminal of output stage for CH3
5	V_{IN1}	Input for CH1 • Not biased inside.	16	OUT(+)3	Non-inverted output for CH3
			17	V_{IN3}	Input for CH3
6	V_{RI}	Input reference voltage • Under condition of $V_{RI} \leq 1.8V$, internal bias circuit is shut off. • No signal input condition : $V_{R1} = V_{IN}$	18	S GND	Supply terminal of small signal GND
			19	S V_{CC}	Small signal GND
			20	V_{IN4}	Input for CH4
			21	OUT(+)4	Non-inverted output for CH4
7	V_{CI}	Output reference voltage • $V_{OUT} = V_{CI} = (V_{CC} - V_F) / 2$	22	PV_{CC4}	Supply terminal of output stage for CH4
			23	OUT(-)4	Inverted output for CH4
			24	PW GND	Power GND

IC BLOCK DIAGRAM & DESCRIPTION

IC160 ES3210FM (Video CD Processor)

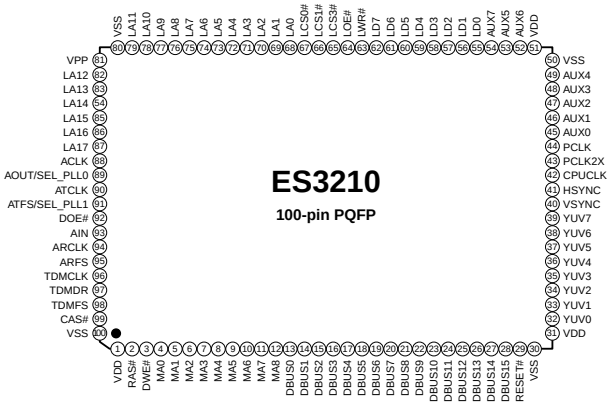
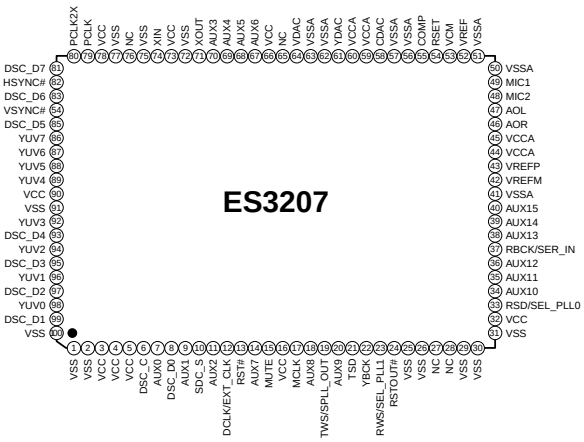


Figure 1 ES3210 Pinout Diagram

Table 1 ES3210 Pin Description

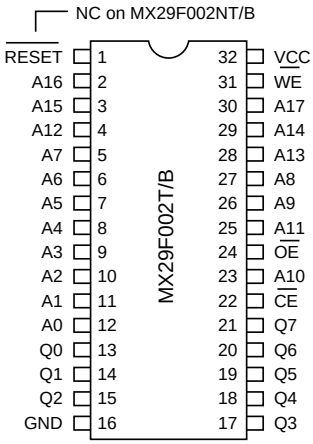
Name	Number	I/O	Definition
VDD	1, 31, 51	I	Voltage supply for 3.3V.
RAS#	2	O	DRAM row address strobe (active low).
DWE#	3	O	DRAM write enable (active low).
MA[8:0]	12:4	O	DRAM multiplexed row and column address bus.
DBUS[15:0]	28:13	I/O	DRAM data bus I/O [15:0]
RESET#	29	I	System reset (active low).
VSS	30, 50, 80, 100	I	Ground.
YUV[7:0]	39:32	O	YUV[7:0] pixel output data.
VSYNC	40	I/O	Vertical sync for screen video interface,programmable for rising or falling edge.
HSYNC	41	I/O	Horizontal sync for screen video interface,programmable for rising or falling edge.
CPUCLK	42	I	RISC and system clock input. CPUCLK is used only if SEL_PLL[1:0]=00.
PCLK2X	43	I/O	Pixel clock,two times the actual pixel clock for screen video interface.

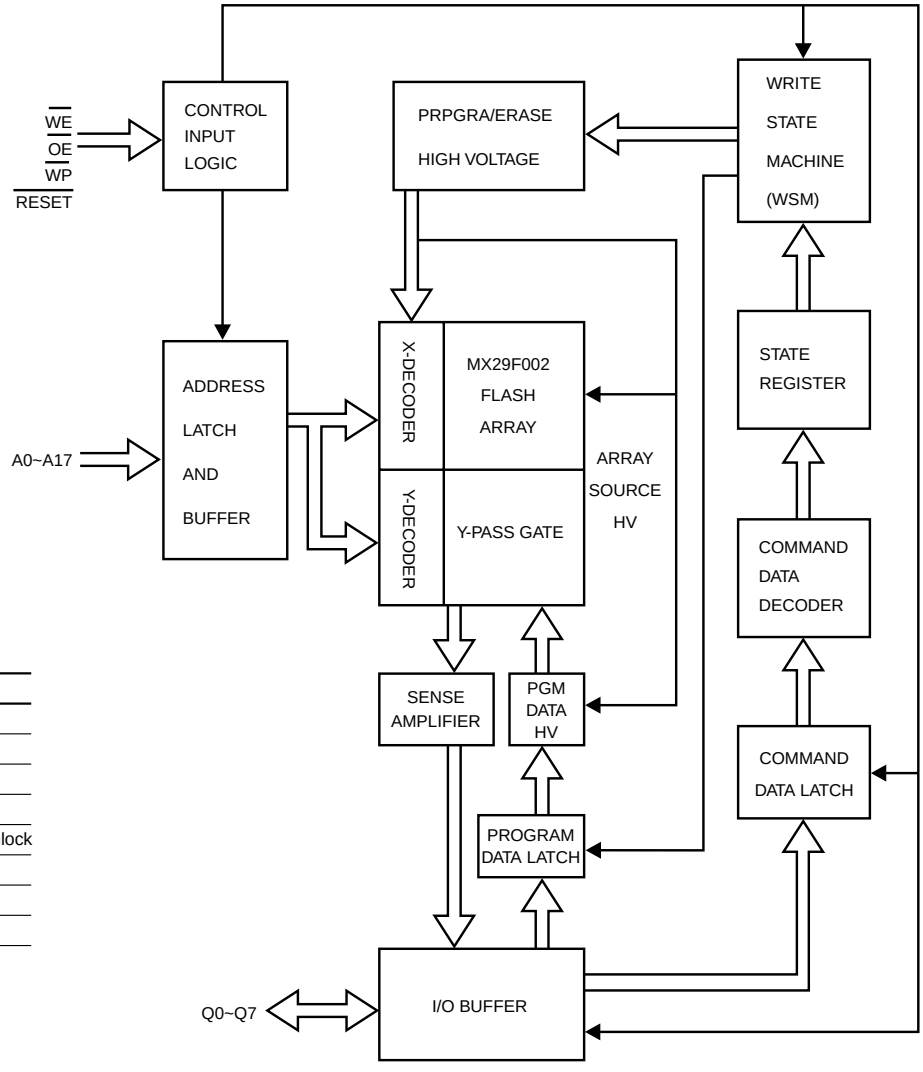
IC170 ES3207FP (Video CD Companion)



Name	Number	I/O	Definition
VSS	1:2,25:26,29:31,72,75,77,91,100	I	Ground.
VCC	3:5,16,32,66,73,78,90	I	Voltage supply, 5V.
DSC_C	6	I	Clock for programming to access internal registers.
AUX[15:0]	40:38,36:34,20,18,14,67:70,11,9,7	I/O	Auxiliay control pins.
DSC_D[7:0]	81,83,85,93,95,97,99,8	I/O	Data for programming to access internal registers.
DSC_S	10	I	Strobe for programming to access internal registers.
DCLK	12	O	Dual-purpose pin. DCLK is fhe MPEG decoder clock.
EXT_CLK		I	EXT_CLK is the external clock. EXT_CLK is an input during bypass PLL mode.
RST#	13	I	Video reset (active-low).
MUTE	15	O	Audio mute.
MCLK	17	I	Audio master clock.
TWS	19	I	Dual-purpose pin. TWS is the transmit audio frame sync.
SPLL_OUT		O	SPLL_OUT is the select PLL output.

IC180 MX29F002TPC-70 (2M Bit CMOS Flash Memory)



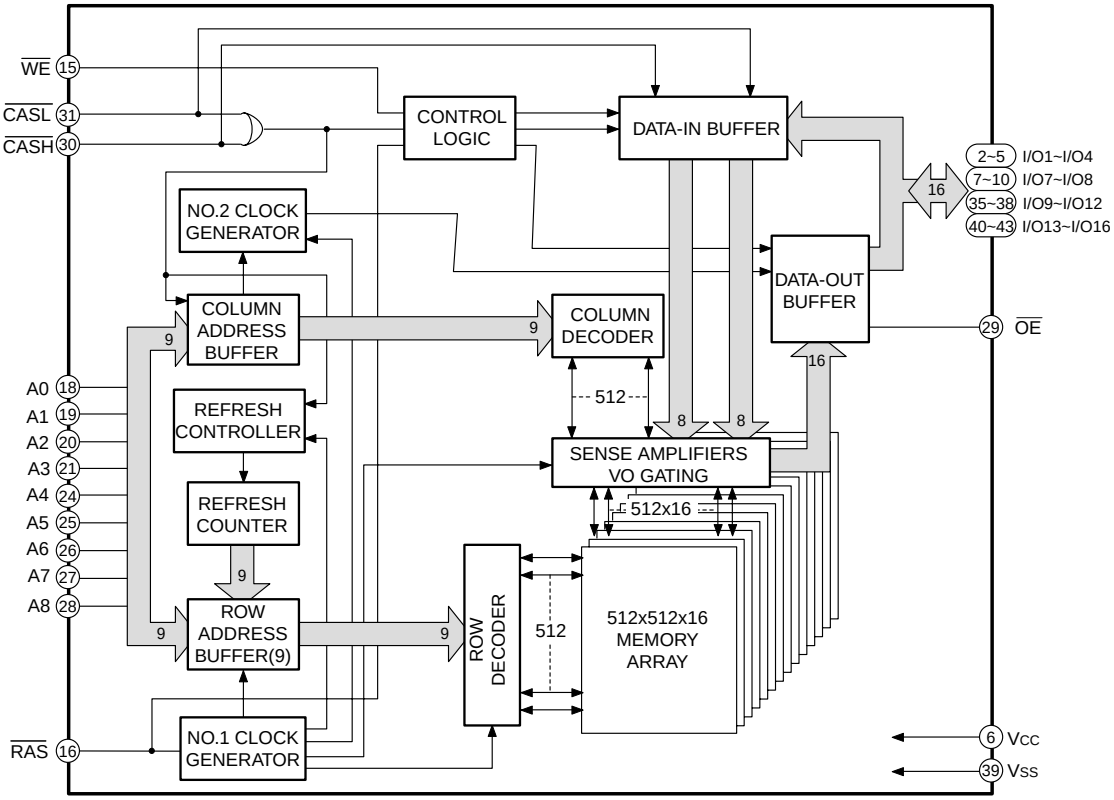


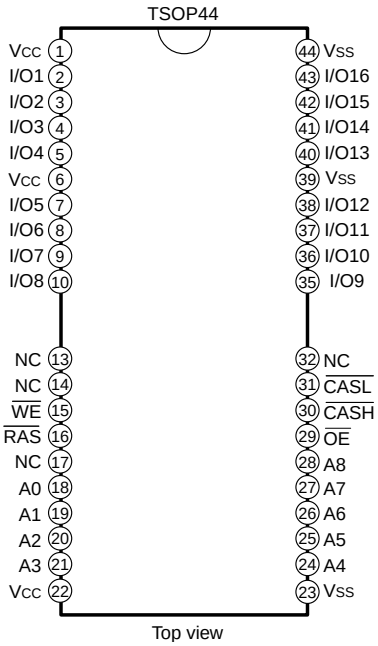
PIN DESCRIPTION

SYMBOL	PIN NAME
A0~A17	Address Input
Q0~Q7	Data Input/Output
$\overline{CE}$	Chip Enable Input
$\overline{WE}$	Write Enable Input
$\overline{RESET}$	Hardware Reset Pin/Sector Protect Unlock
$\overline{OE}$	Output Enable Input
VCC	Power Supply Pin (+5V)
GND	Ground Pin

IC BLOCK DIAGRAM & DESCRIPTION

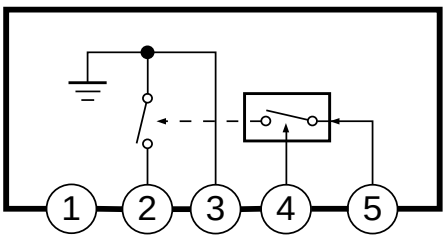
IC190 T224162B-35S (DRAM)



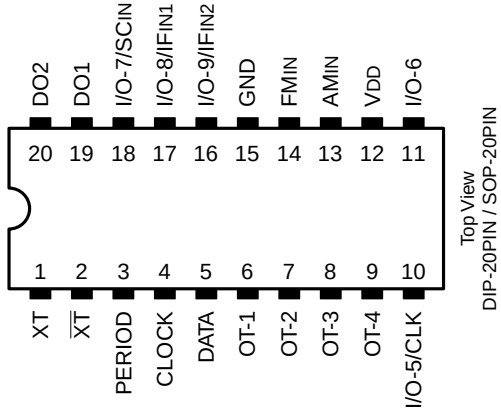


PIN NO.	SYM.	TYPE	DESCRIPTION
16~19,22~26	A0~A8	Input	Address Input
14	$\overline{RAS}$	Input	Row Address Strobe
28	$\overline{CASH}$	Input	Column Address Stlobe /Upper Byte Control
29	$\overline{CASL}$	Input	Column Address Stlobe /Lower Byte Control
13	$\overline{WE}$	Input	Write Enable
27	$\overline{OE}$	Input	Output Enable
2~5,6~10,31~34,36~39	I/O1-I/O16	Input/Output	Data Input /Output
1,6,20	VCC	Supply	Power, 5V
21,35,40	VSS	Ground	Ground
11,12,15,30	NC	-	No Connec

IC443 BA7755A (Rec/Play Switch)

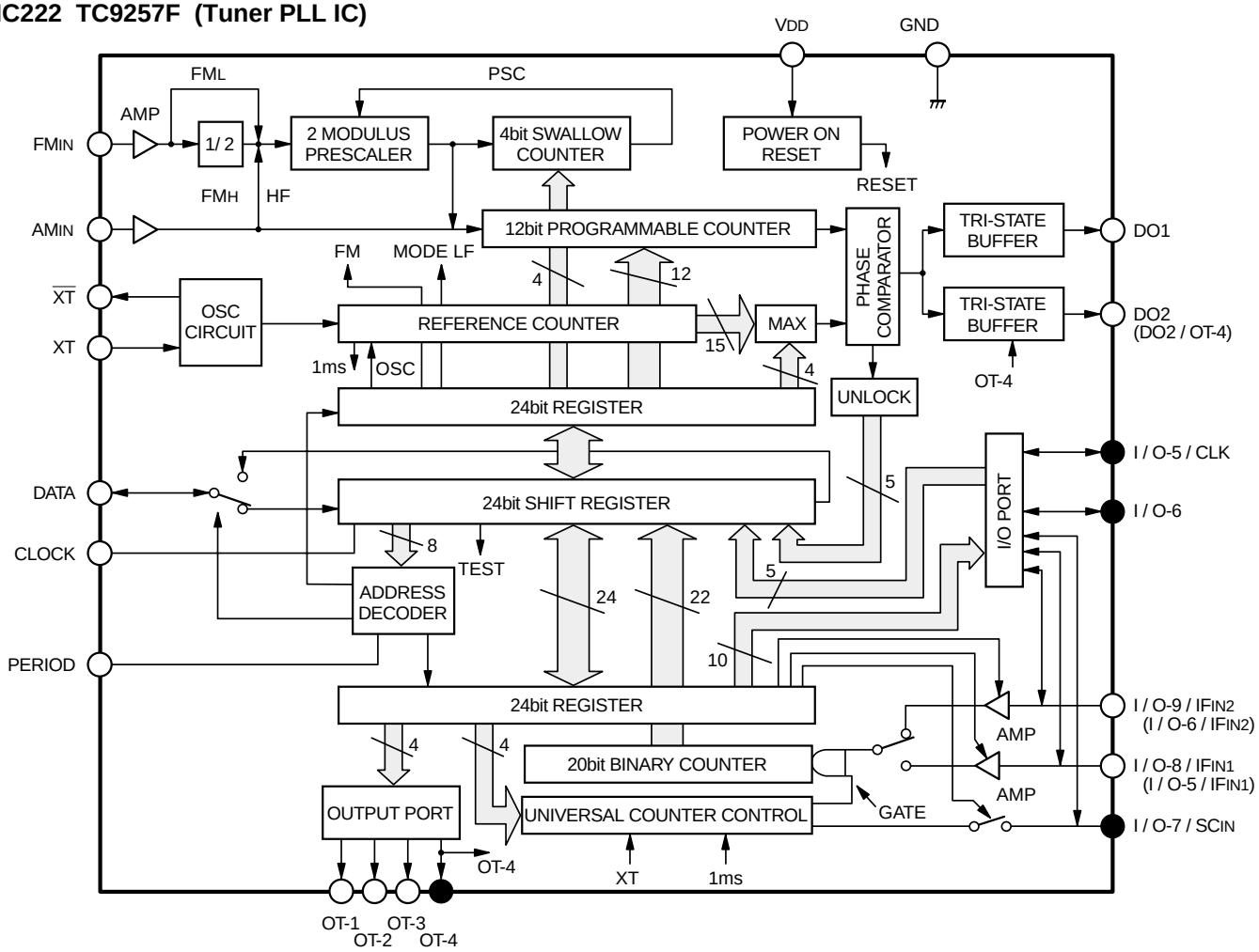


IC222 TC9257F (Tuner PLL IC)



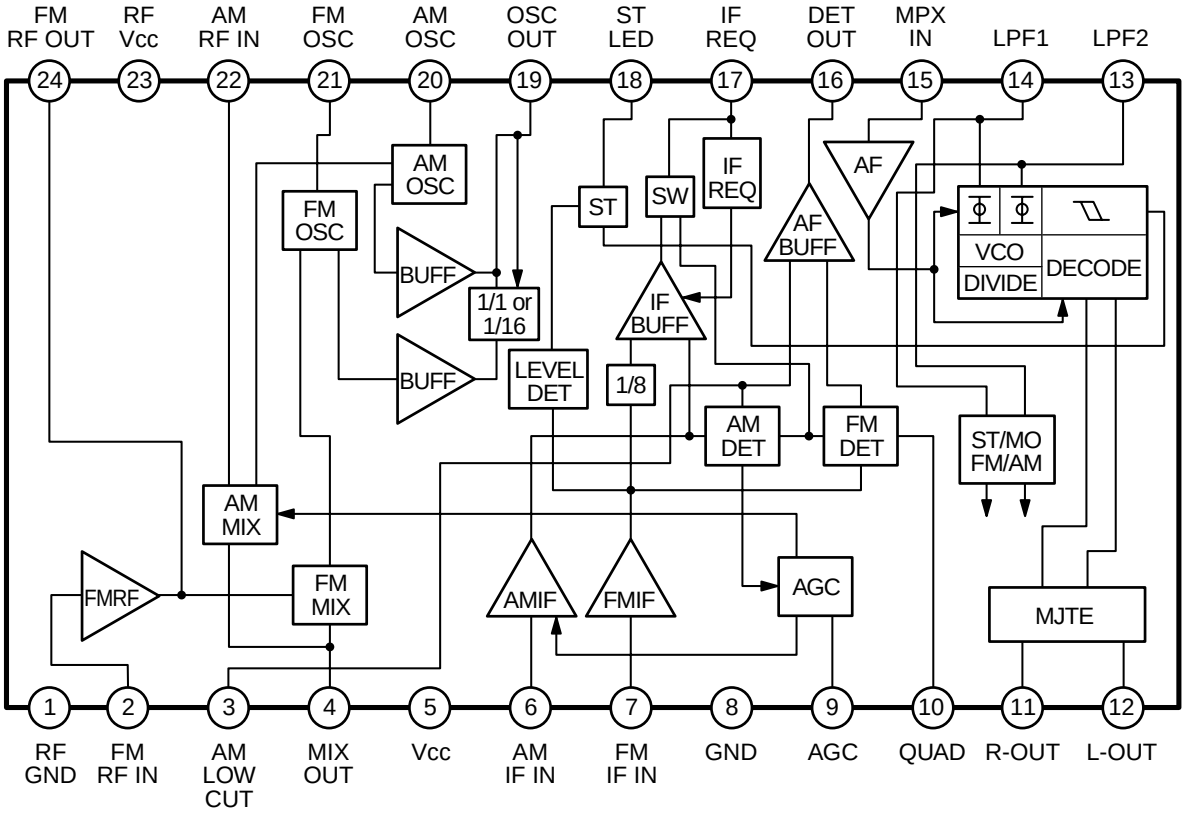
IC BLOCK DIAGRAM & DESCRIPTION

IC222 TC9257F (Tuner PLL IC)



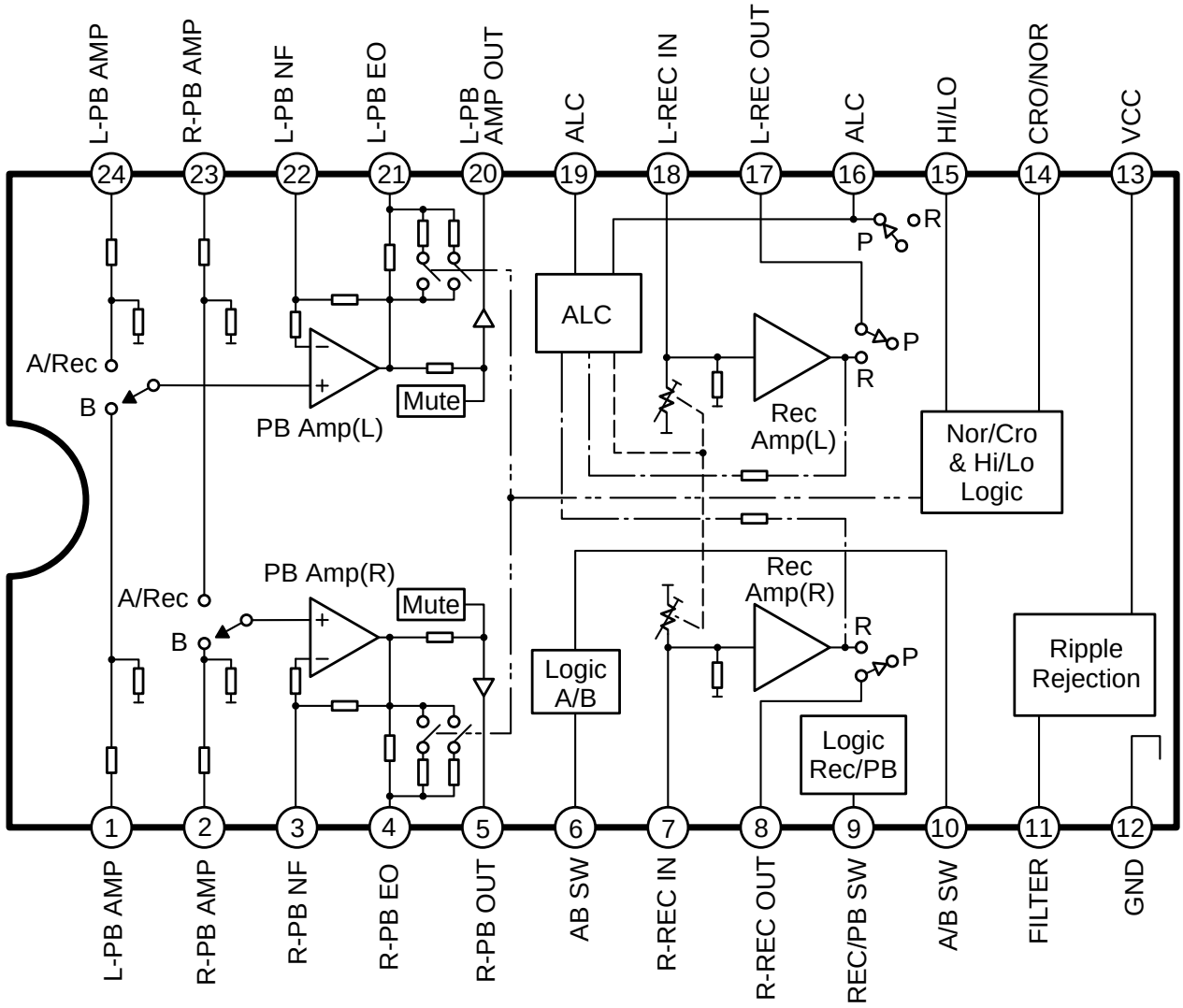
(Note) ● Mark terminals are not existence in TC9256P, TC9256F.
Terminal name of TC9256P, TC9256F is shown in parentheses.
Others are common terminals.

IC211 TA2149BFN (AM/FM 1 Chip Tuner IC)

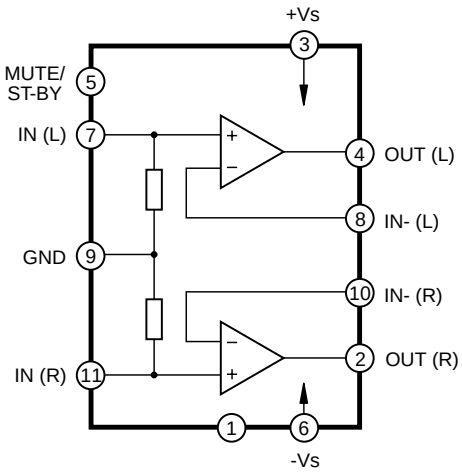


IC BLOCK DIAGRAM & DESCRIPTION

IC440 AN7348K (Play / REC Pre Amp)



IC442 TDA7265 (Stereo Amplifier with Mute & ST-BY)

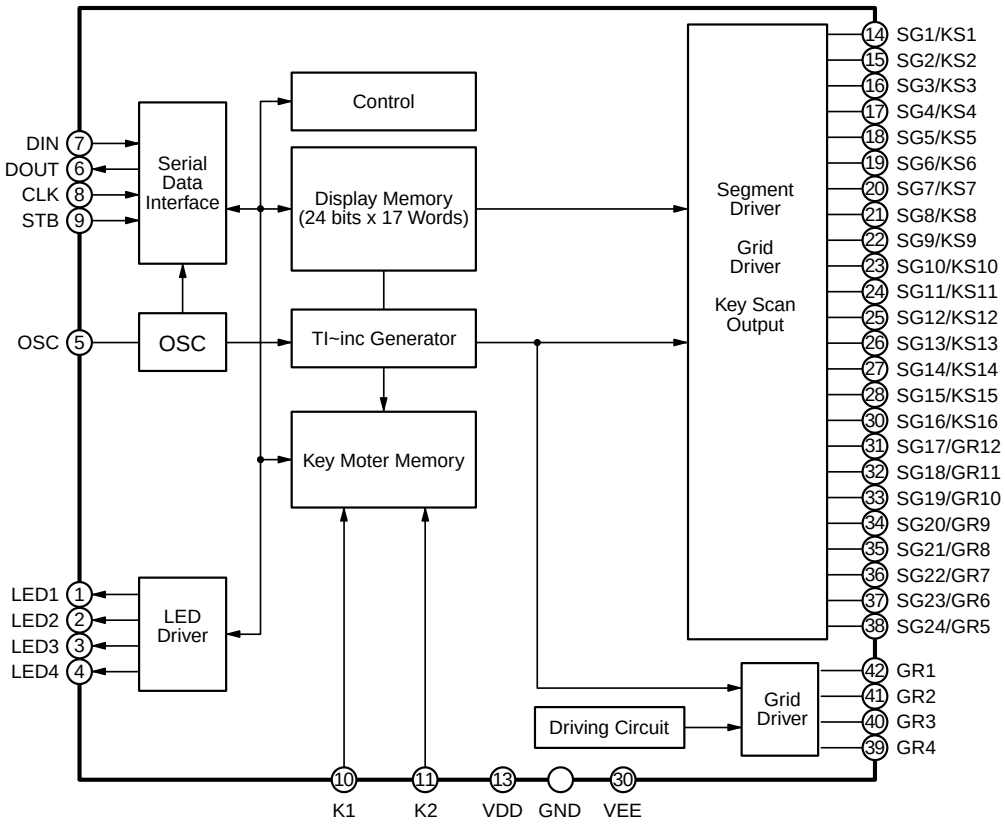


IC601 PT6315 (VFD Driver/Control IC)

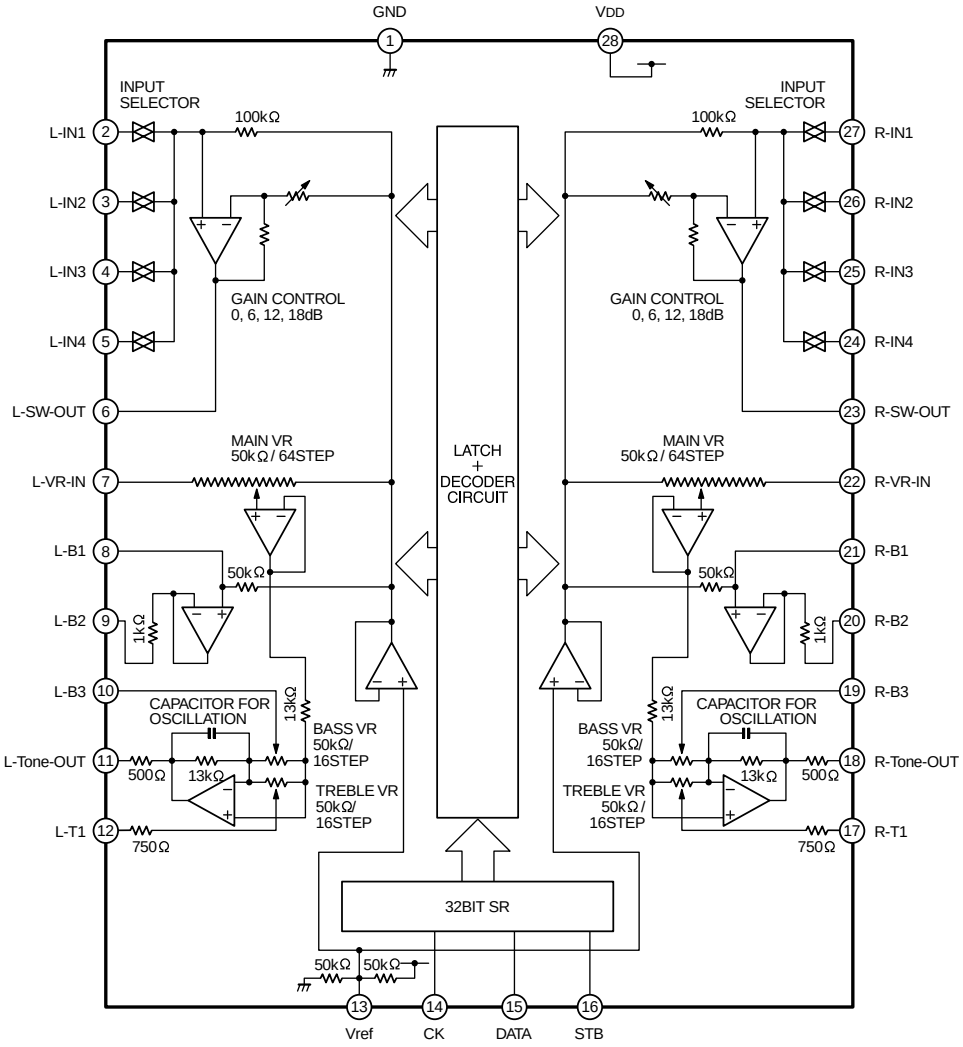
Pin Name	I/O	Description	Pin No.
LED1 to LED4	O	LED Output Pin	1 to 4
OSC	I	Oscillator Input Pin A resistor is connected to this pin to determinc the oscillation frequency	5
DOUT	O	Data Output Pin (N-Channel, Open-Drain) This pin outputs scrial data at the falling cdge of the shift clock (starting from the lower bit)	6
DIN (Schmitt Trigger)	I	Data Input Pin This pin inputs serial data at the rising cdge of the shift clock (starting from the lower bit)	7
CLK (Schmitt Trigger)	I	Clock Input Pin This pin reads serial data at the rising cdge and outputs data at the falling cdge.	8
STB (Schmitt Trigger)	I	Serial Interface Strobe Pin The data input after the STB has fallen is processed as a command. When this pin "HIGH",CLK is ignored,	9
K1 to K2	I	Key Data Input Pins The data inputted to these pins are fatched at the end of the display cycle.	10, 11
VSS	-	Logic Ground Pin	12, 44
VDD	-	Logic Power Supply	13, 43
SG1/KS1 to SG16/KS16	O	High-Voltage Segment Output Pins Also acts as the Key Source	14 to 29
VEE	-	Pull-Down Level	30
SG17/GR12 to SG24/GR5	O	High Voltage Segment/Grid Output Pins	31 to 38
GR4 to GR1	O	High-Voltage Grid Output Pins	39 to 42

IC BLOCK DIAGRAM & DESCRIPTION

IC601 PT6315 (VFD Driver/Control IC)

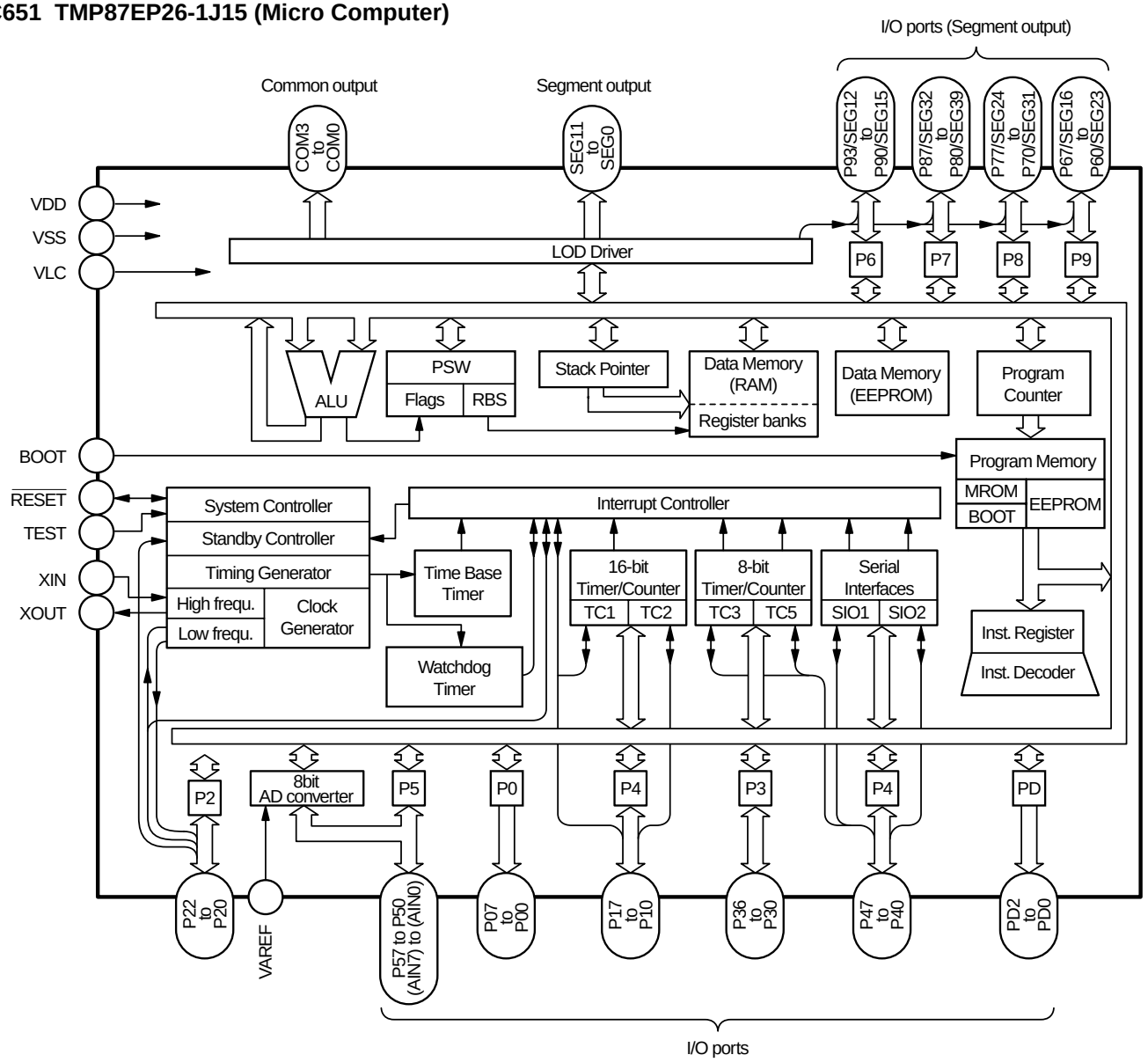


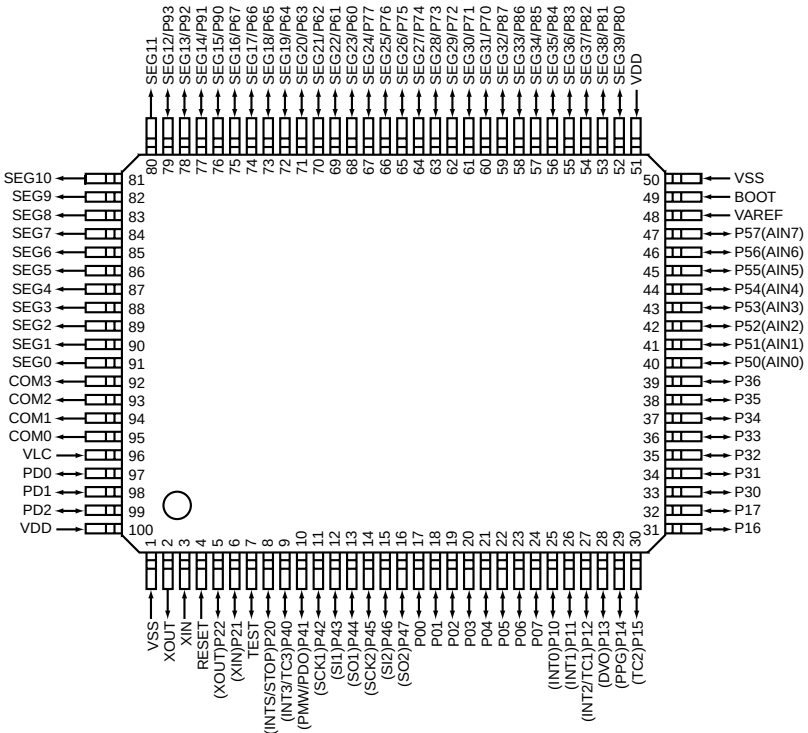
IC441 TC9422F (Volume Control)



IC BLOCK DIAGRAM & DESCRIPTION

IC651 TMP87EP26-1J15 (Micro Computer)

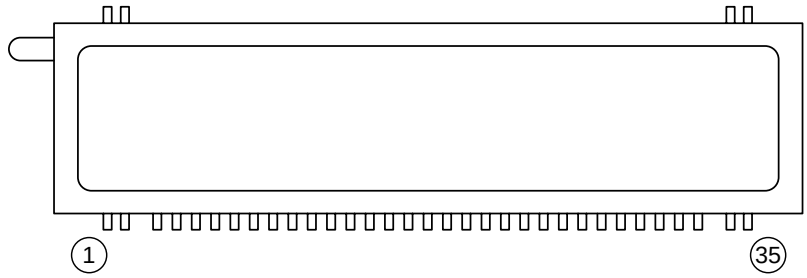




Control Pin	I/O	Remarks
XIN XOUT	Input Output	Resonator connecting pins (high-frequency) Rf=1.2MΩ (typ.) Ro=1.5kΩ (typ.) R=1kΩ (typ.)
XTIN XTOUT	Input Output	Resonator connecting pins (low-frequency) Rf=6MΩ (typ.) Ro=220kΩ (typ.) R=1kΩ (typ.)
$\overline{\text{RESET}}$	I/O	Sink open drain output. Hysteresis input. Pull-up resistor. R_{IN}=220kΩ (typ.) R=1kΩ (typ.)
$\overline{\text{STOP}}$/$\overline{\text{INTS}}$	Input	Hysteresis input. R=1kΩ (typ.)
TEST BOOT	Input	Pull-down resistor. R_{IN}=70kΩ (typ.) R=1kΩ (typ.)
P0 P5	I/O	Tri-state I/O. R=1kΩ (typ.)
P1	I/O	Tri-state I/O. Hysteresis input. R=1kΩ (typ.)
P3	I/O	Sink open drain output. Hysteresis input. R=1kΩ (typ.)
P2	I/O	Sink open drain output. R=1kΩ (typ.)
P6 P7 P8 P9	I/O	Sink open drain or Segment output. R=1kΩ (typ.)
P4	I/O	Sink open drain or push-pull output. P41 High current output. Hysteresis input.
PD	I/O	Sink open drain output. R=1kΩ (typ.)

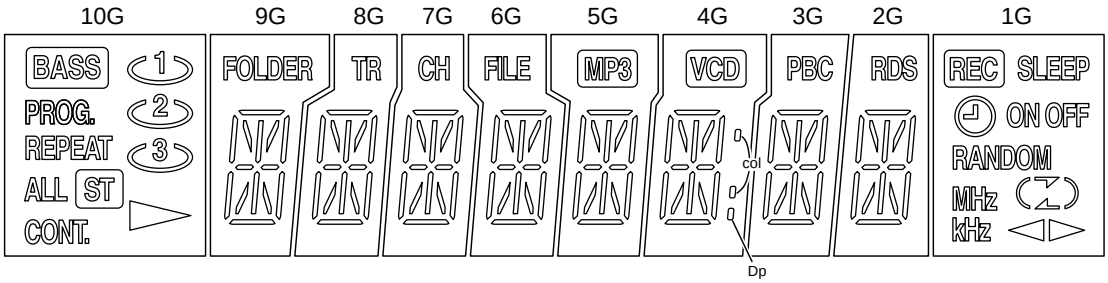
FL DISPLAY DESCRIPTION

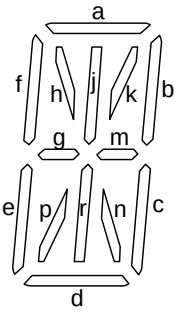
FL601



PIN No.	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18
CONNECTION	F	F	NP	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NX	NX	P17	P16	P15

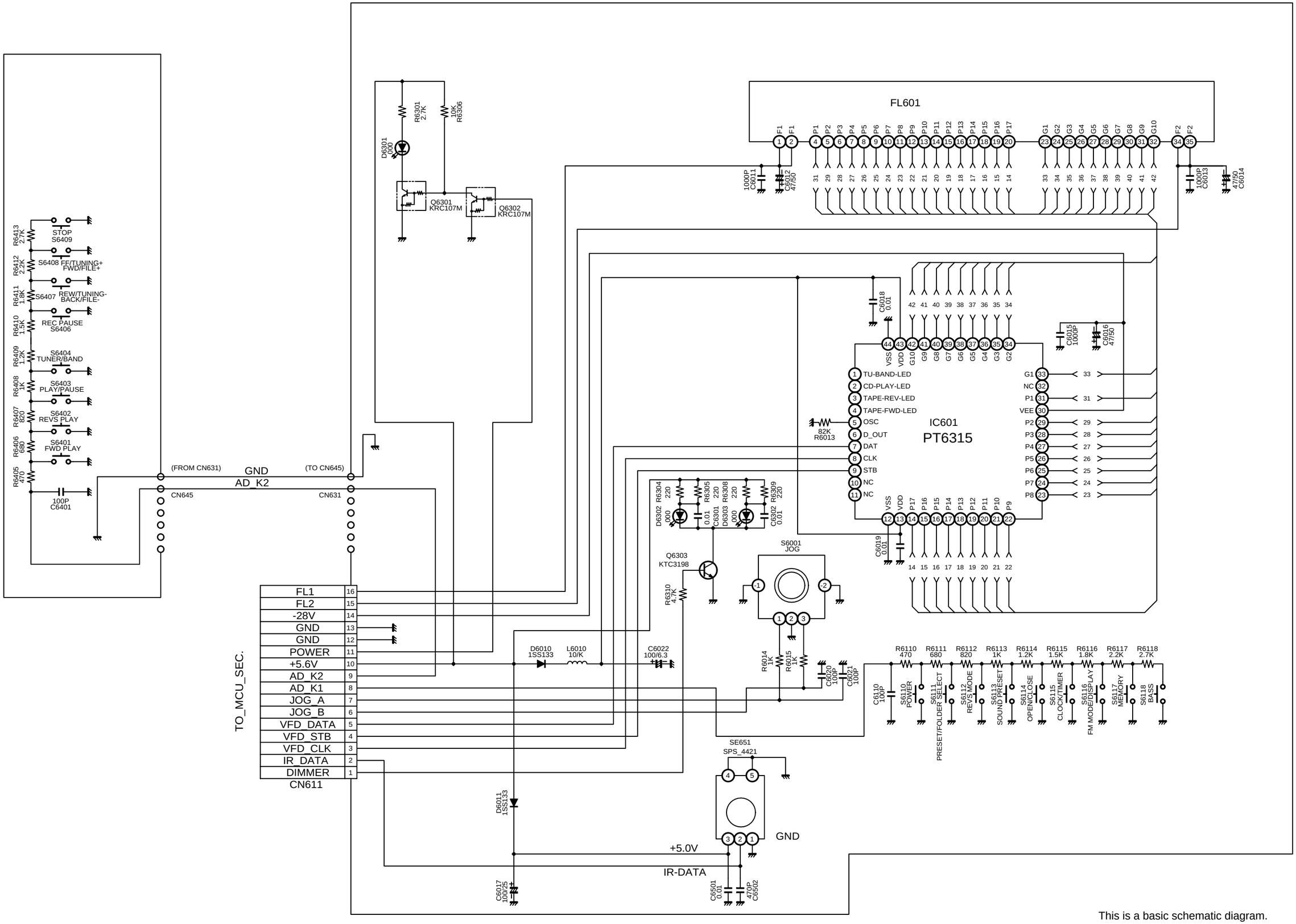
PIN No.	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
CONNECTION	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1	NP	F	F



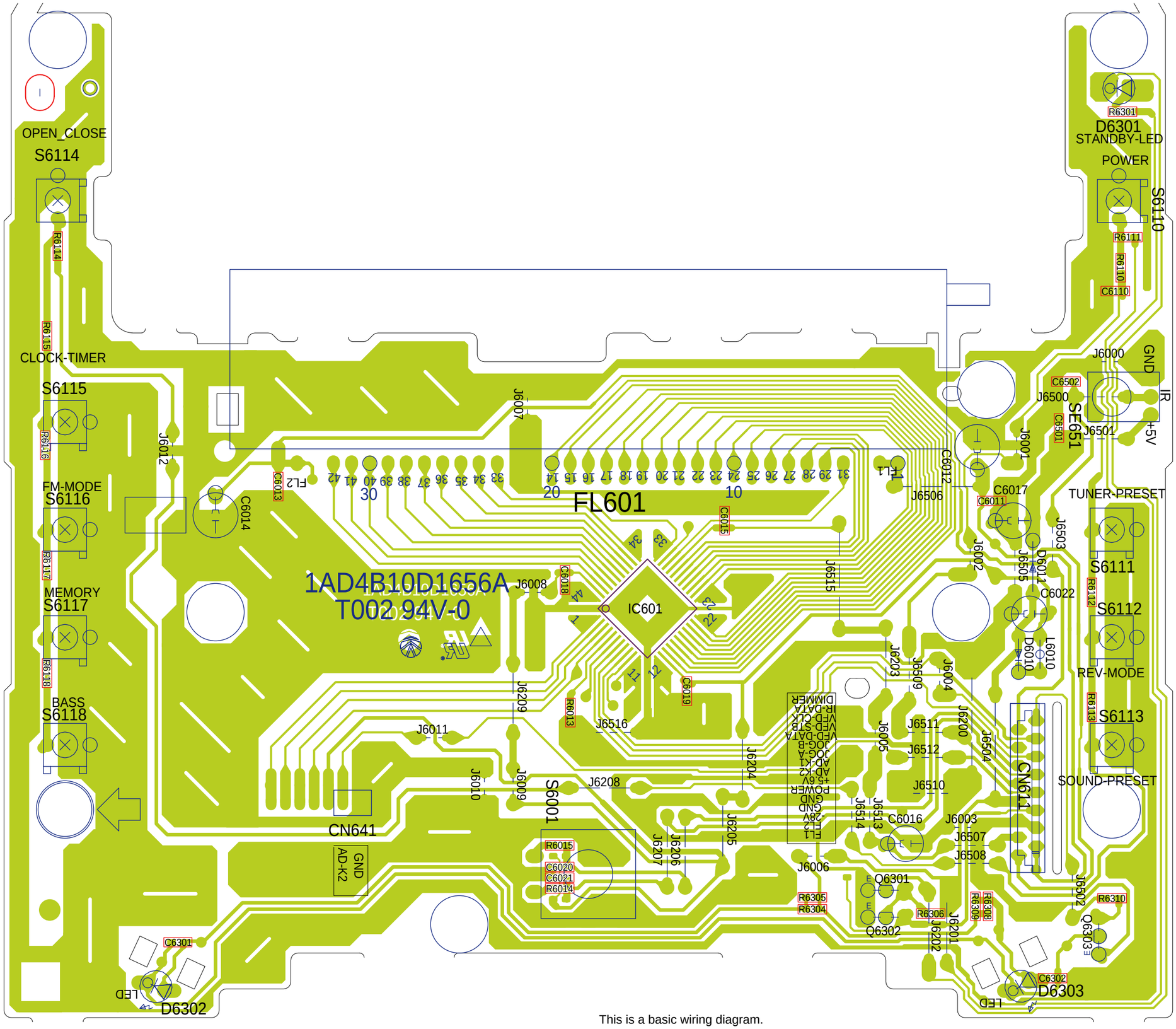


(2G~9G)

	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	1	FOLDER	TR	CH	FILE	MP3	VCD	PBC	RDS	REC
P2	(1)	a	a	a	a	a	a	a	a	SLEEP
P3	BASS	b	b	b	b	b	b	b	b	
P4	2	f	f	f	f	f	f	f	f	ON
P5	(2)	h	h	h	h	h	h	h	h	OFF
P6	PROG.	j	j	j	j	j	j	j	j	RANDOM
P7	3	k	k	k	k	k	k	k	k	
P8	(3)	g	g	g	g	g	g	g	g	
P9	REPEAT	m	m	m	m	m	m	m	m	
P10	ST	-	-	-	-	-	col	-	-	
P11	ALL	c	c	c	c	c	c	c	c	MHz
P12		e	e	e	e	e	e	e	e	
P13	CONT.	p	p	p	p	p	p	p	p	
P14	-	r	r	r	r	r	r	r	r	kHz
P15	-	n	n	n	n	n	n	n	n	-
P16	-	d	d	d	d	d	d	d	d	-
P17	-	-	-	-	-	-	Dp	-	-	-

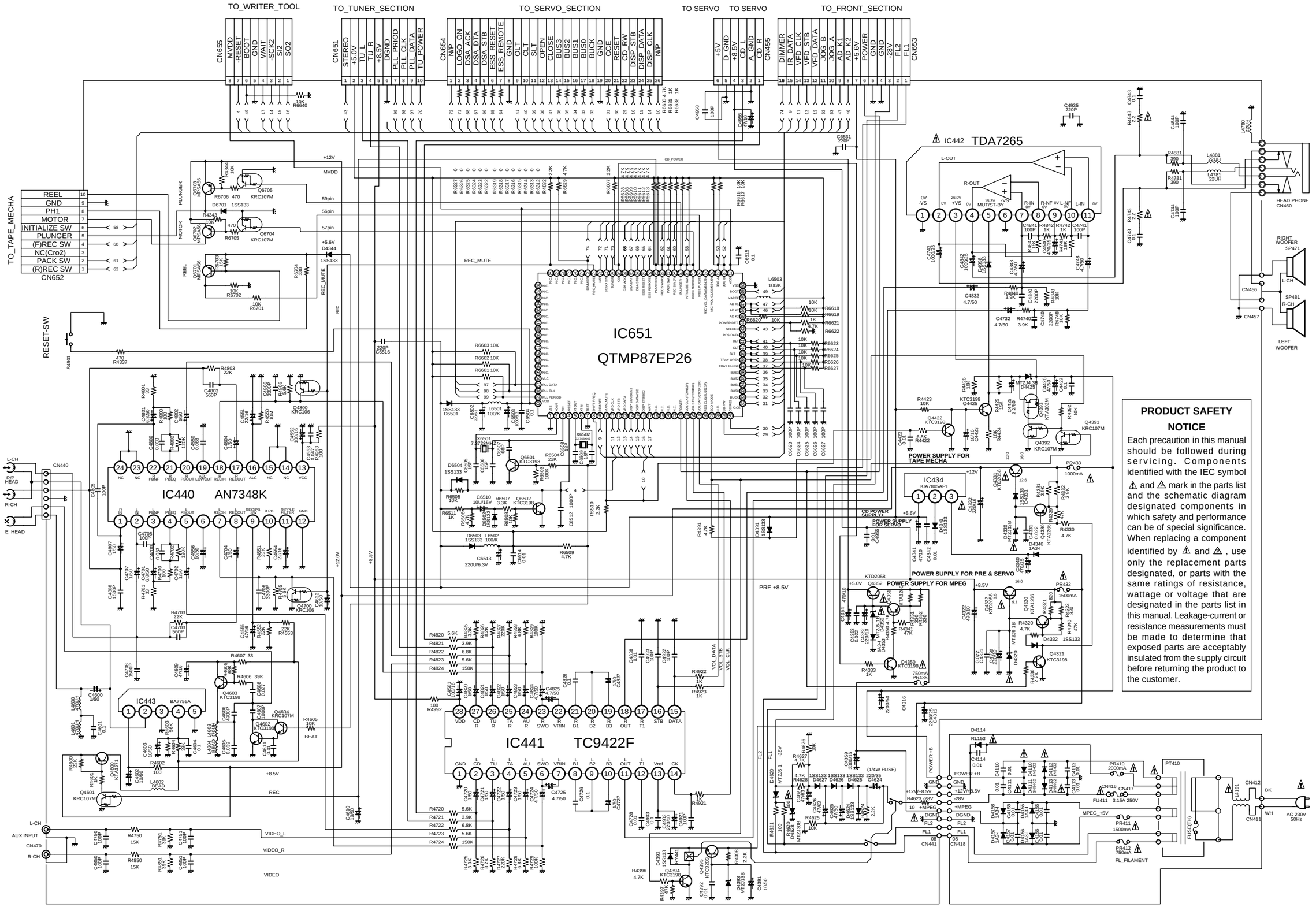


This is a basic schematic diagram.



This is a basic wiring diagram.

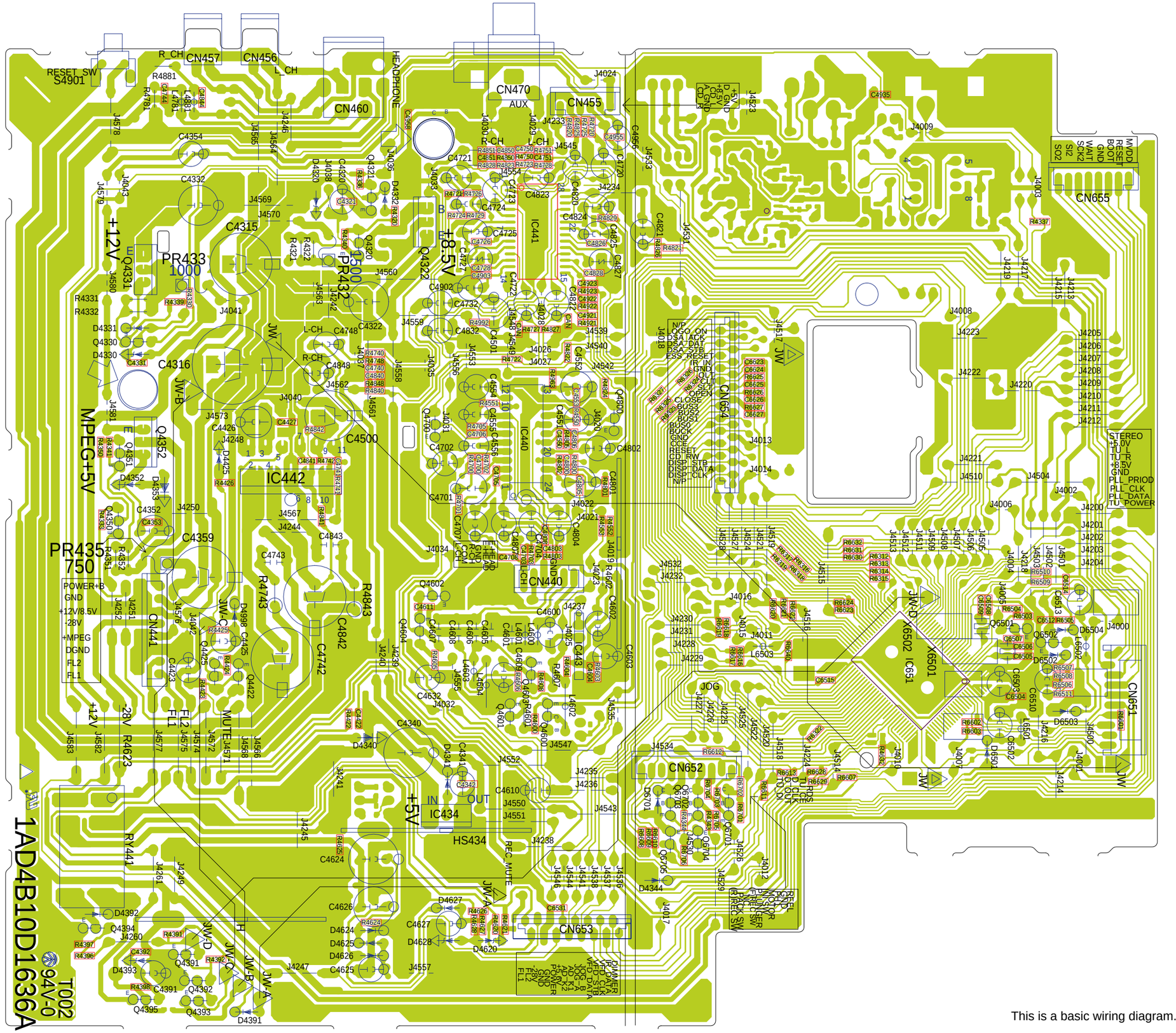
SCHEMATIC DIAGRAM (MAIN)



PRODUCT SAFETY NOTICE

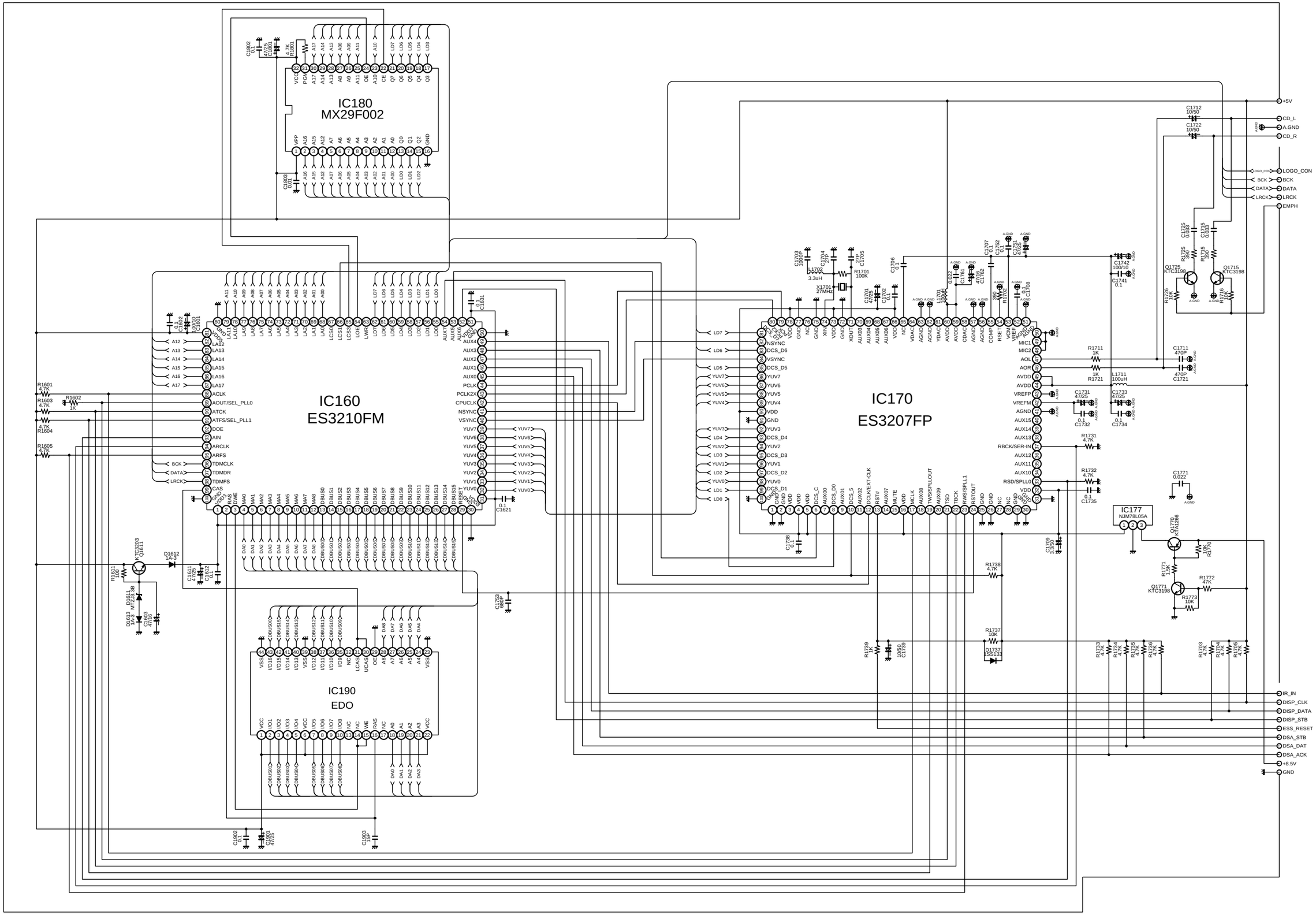
Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ and ⚠ mark in the parts list and the schematic diagram designated components in which safety and performance can be of special significance. When replacing a component identified by ⚠ and ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

This is a basic schematic diagram.



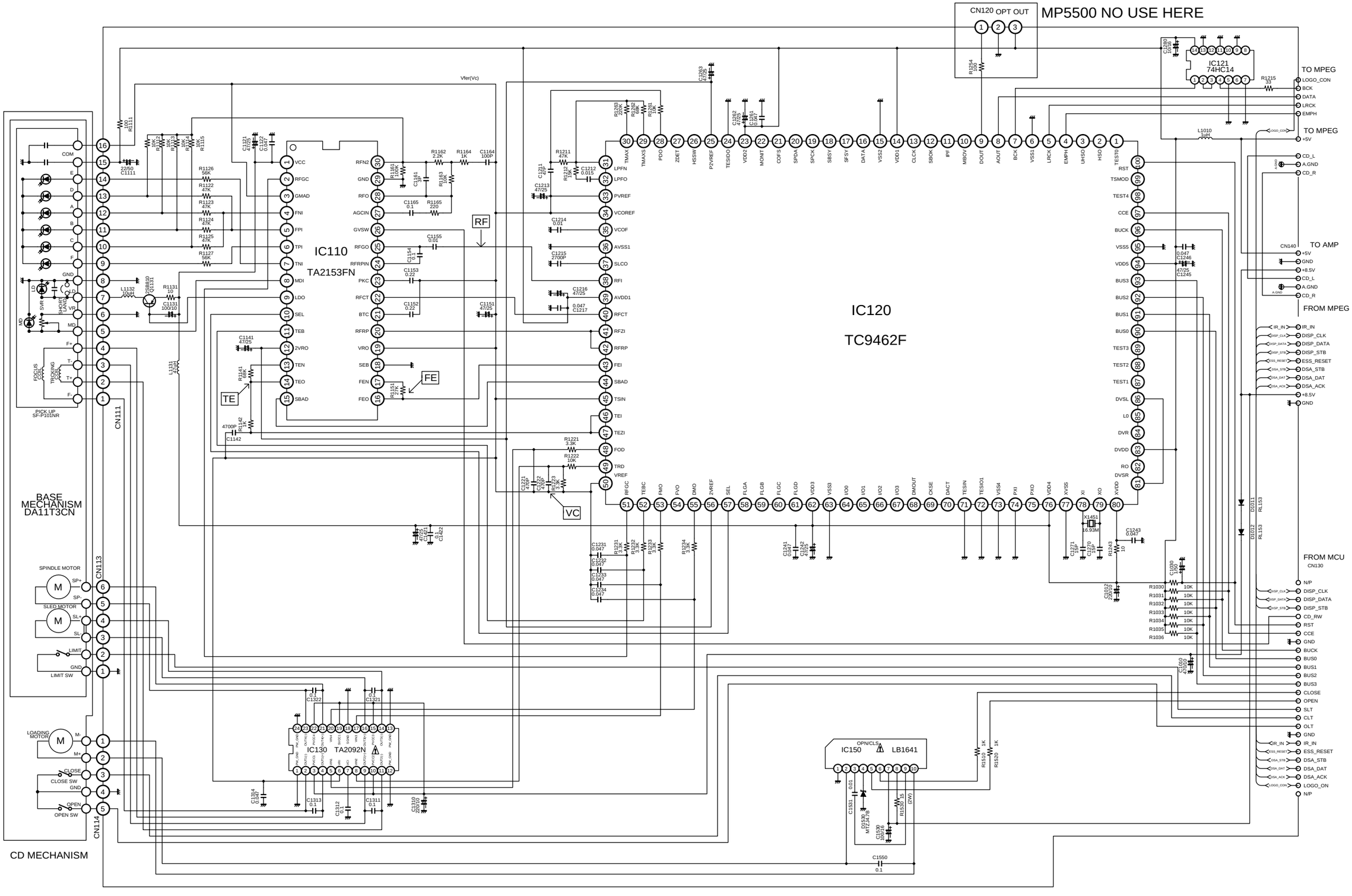
This is a basic wiring diagram.

SCHEMATIC DIAGRAM (MPEG)



This is a basic schematic diagram.

SCHEMATIC DIAGRAM (CD)

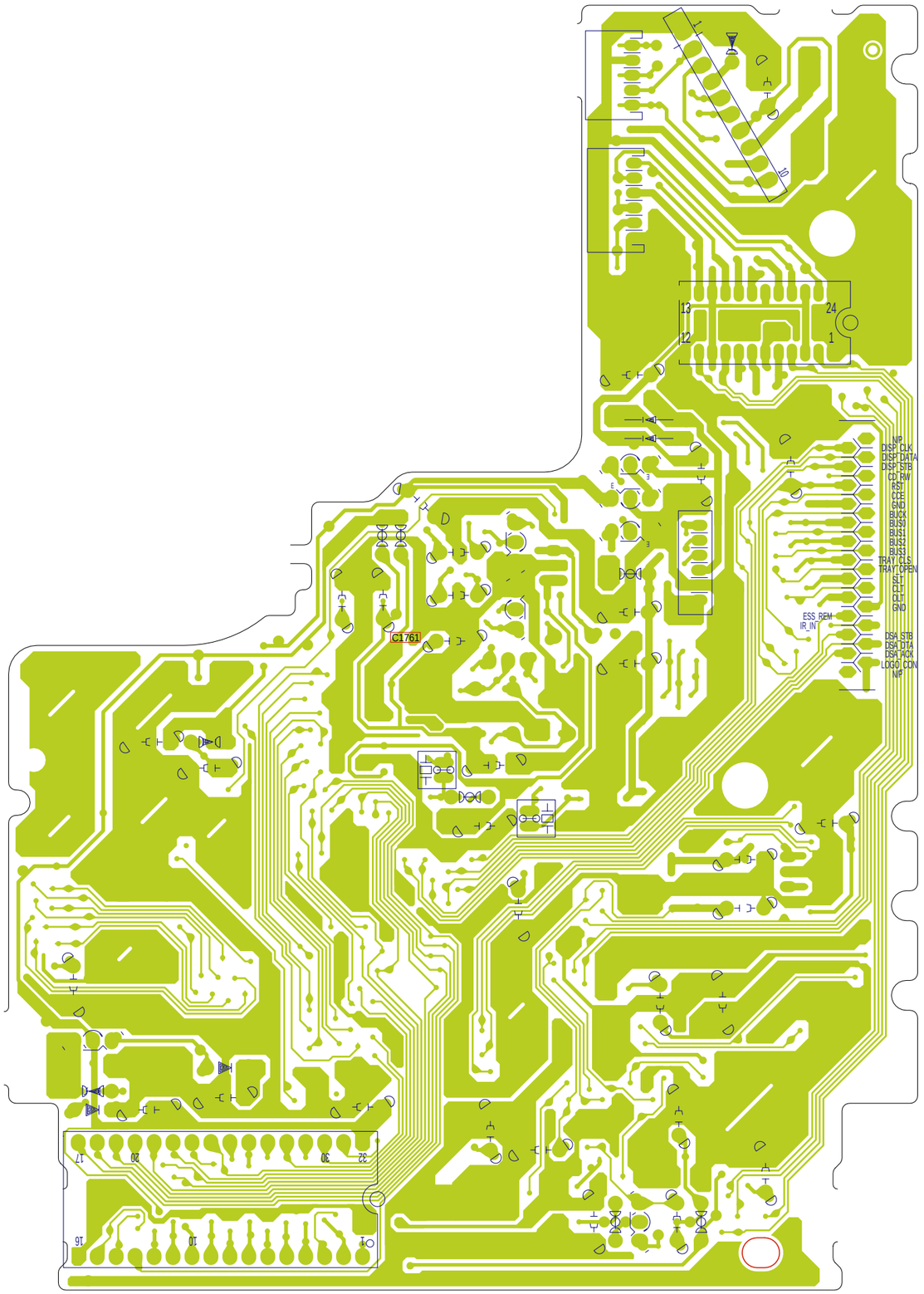


This is a basic schematic diagram.

PRODUCT SAFETY NOTICE

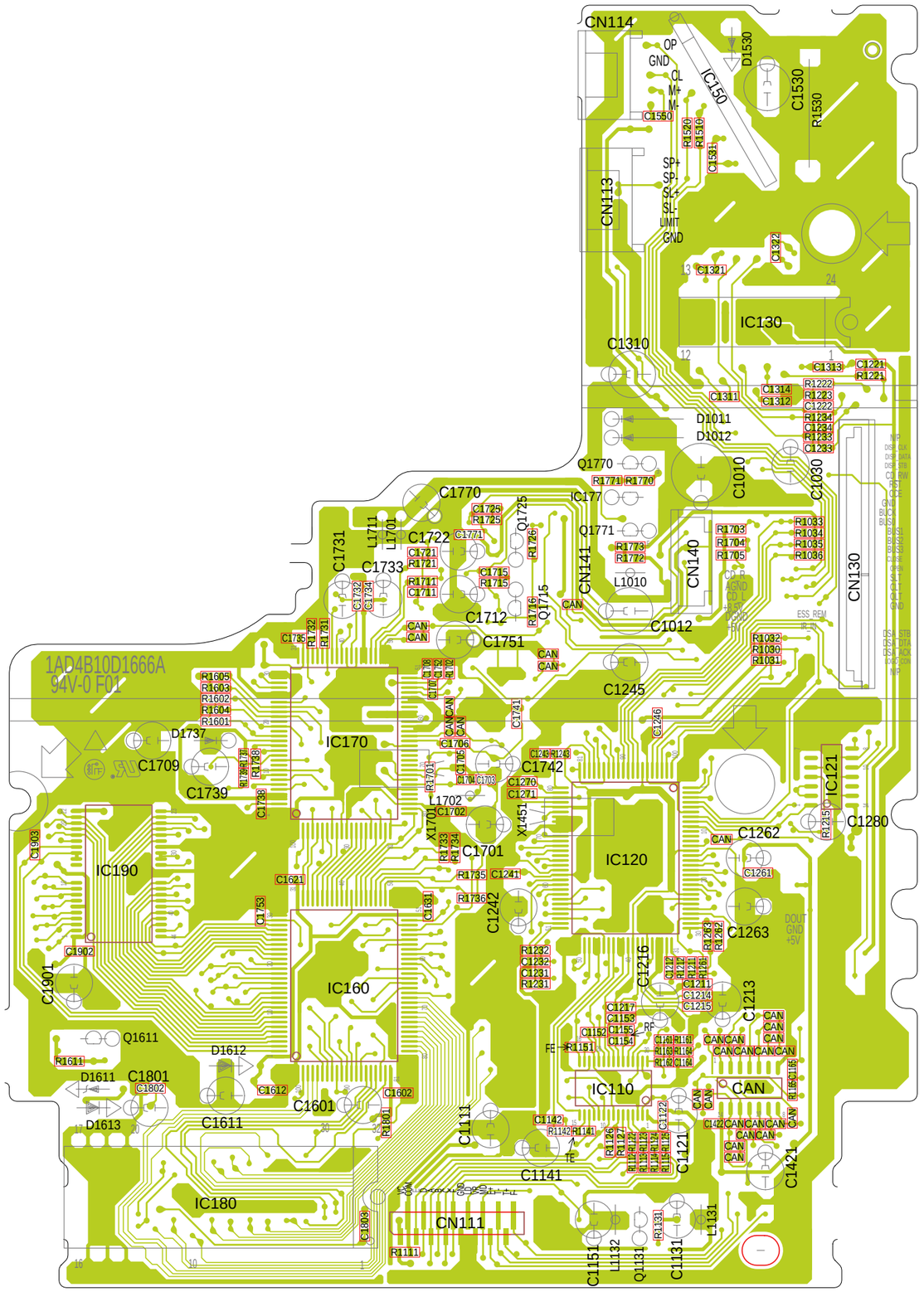
Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ and ⚠ mark in the parts list and the schematic diagram designated components in which safety and performance can be of special significance. When replacing a component identified by ⚠ and ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

WIRING DIAGRAM (CD & MPEG Pattern Side View)



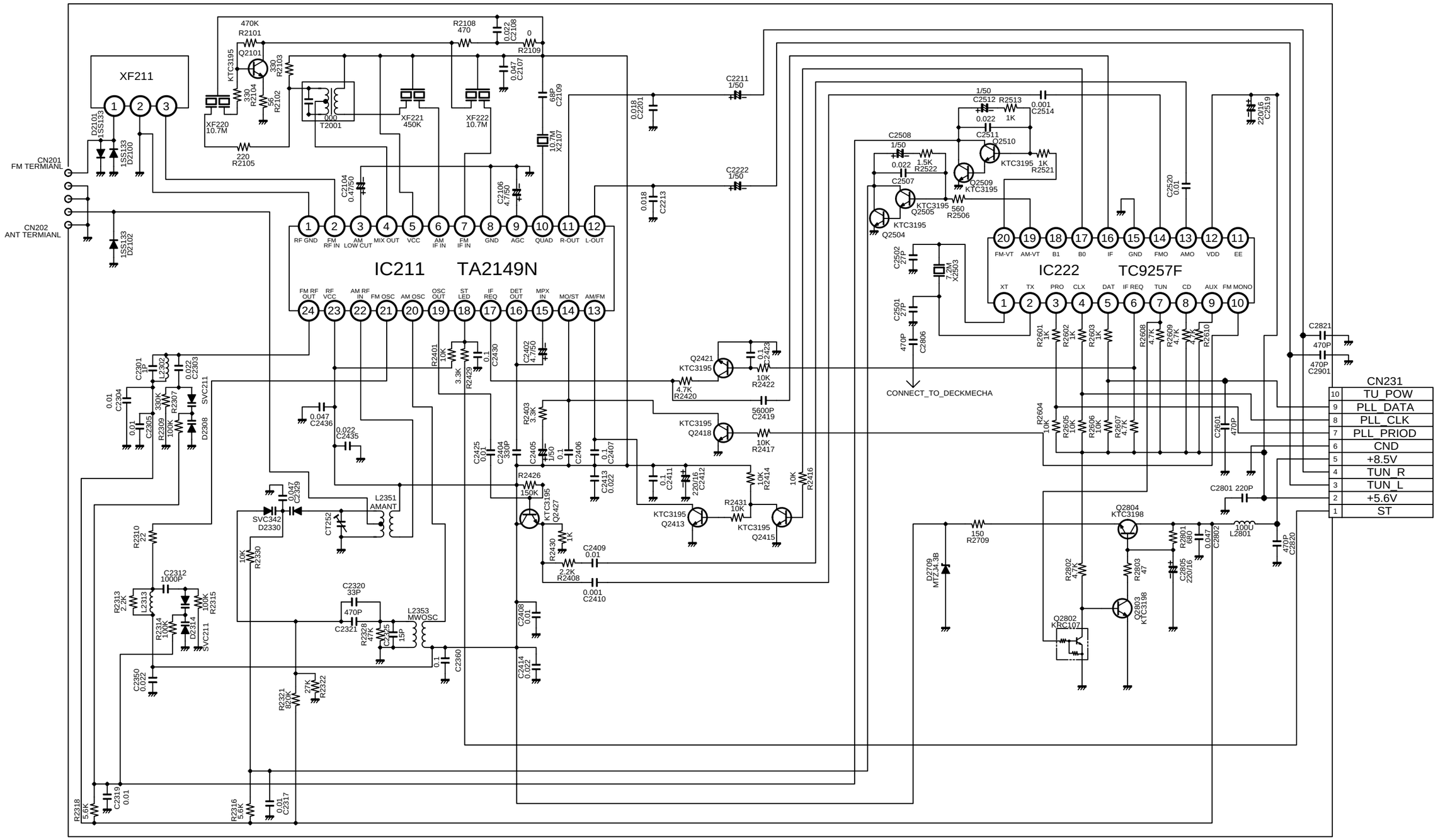
This is a basic wiring diagram.

WIRING DIAGRAM (CD & MPEG Parts Side View)

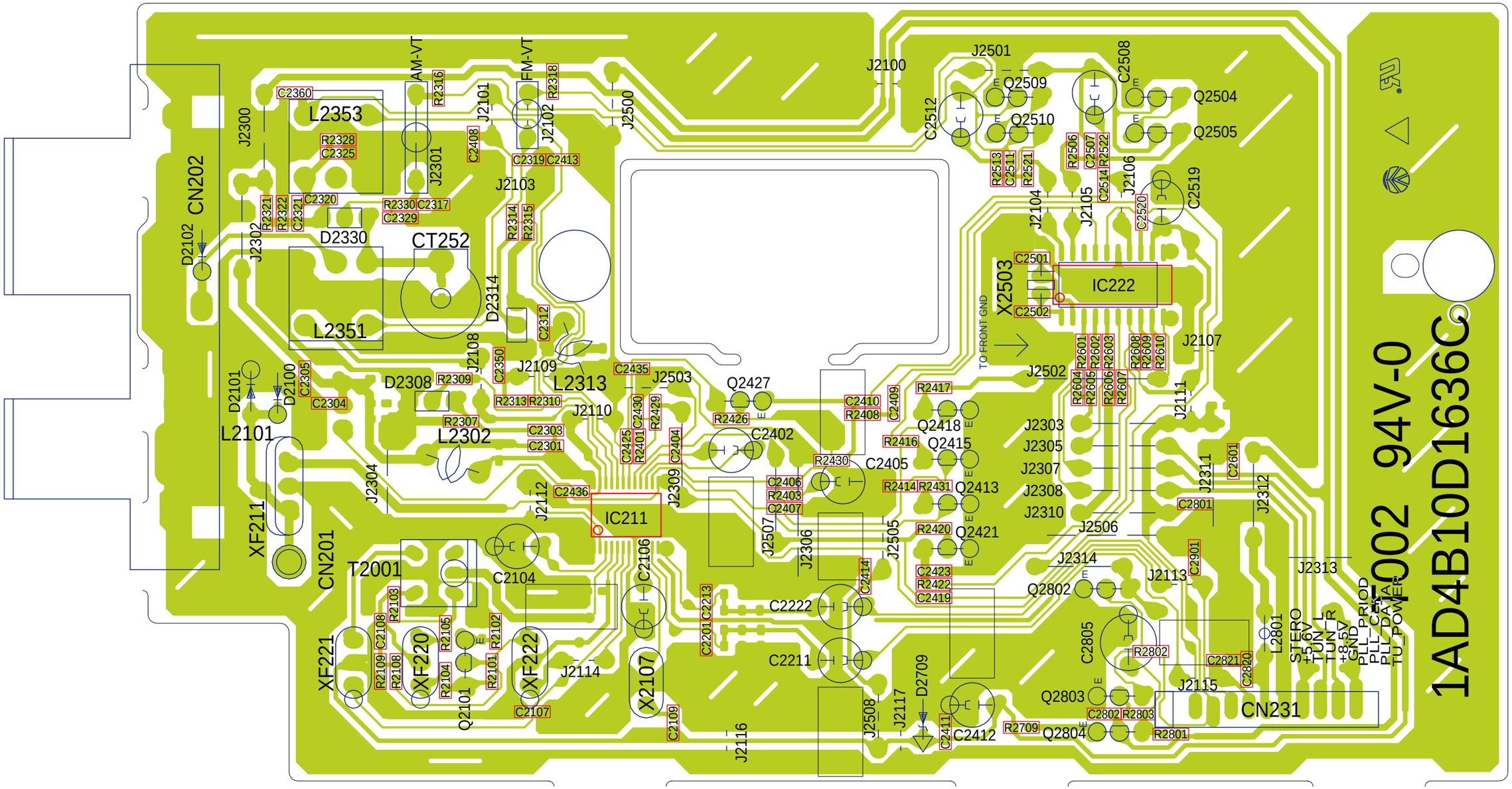


This is a basic wiring diagram.

SCHEMATIC DIAGRAM (TUNER)



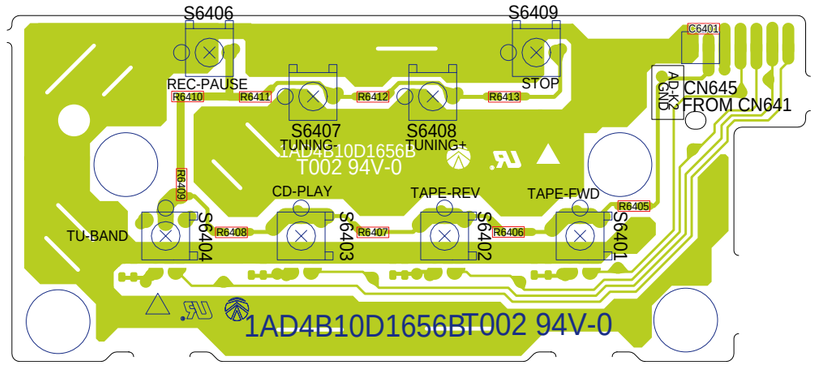
This is a basic schematic diagram.



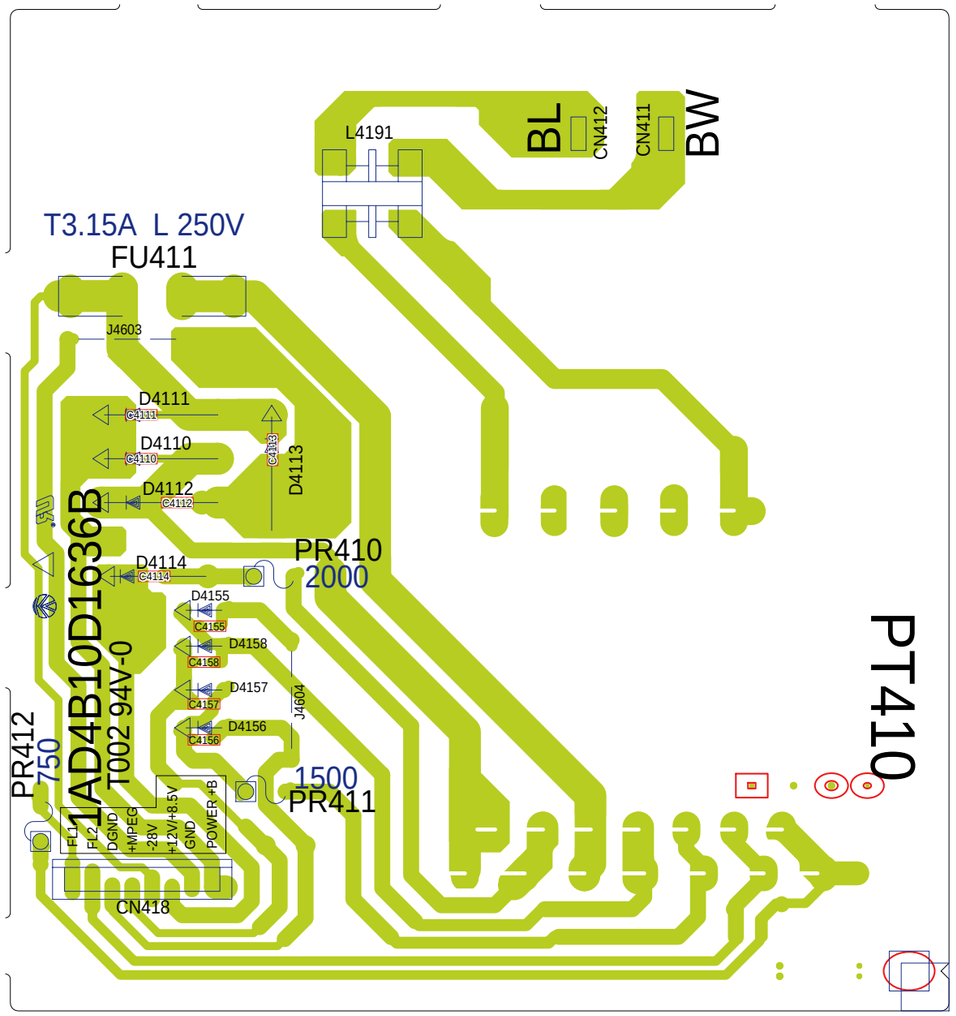
This is a basic wiring diagram.

WIRING DIAGRAM (SWITCH& POWER TRANSFORMER P.W.BOARD)

SWITCH P.W.BOARD

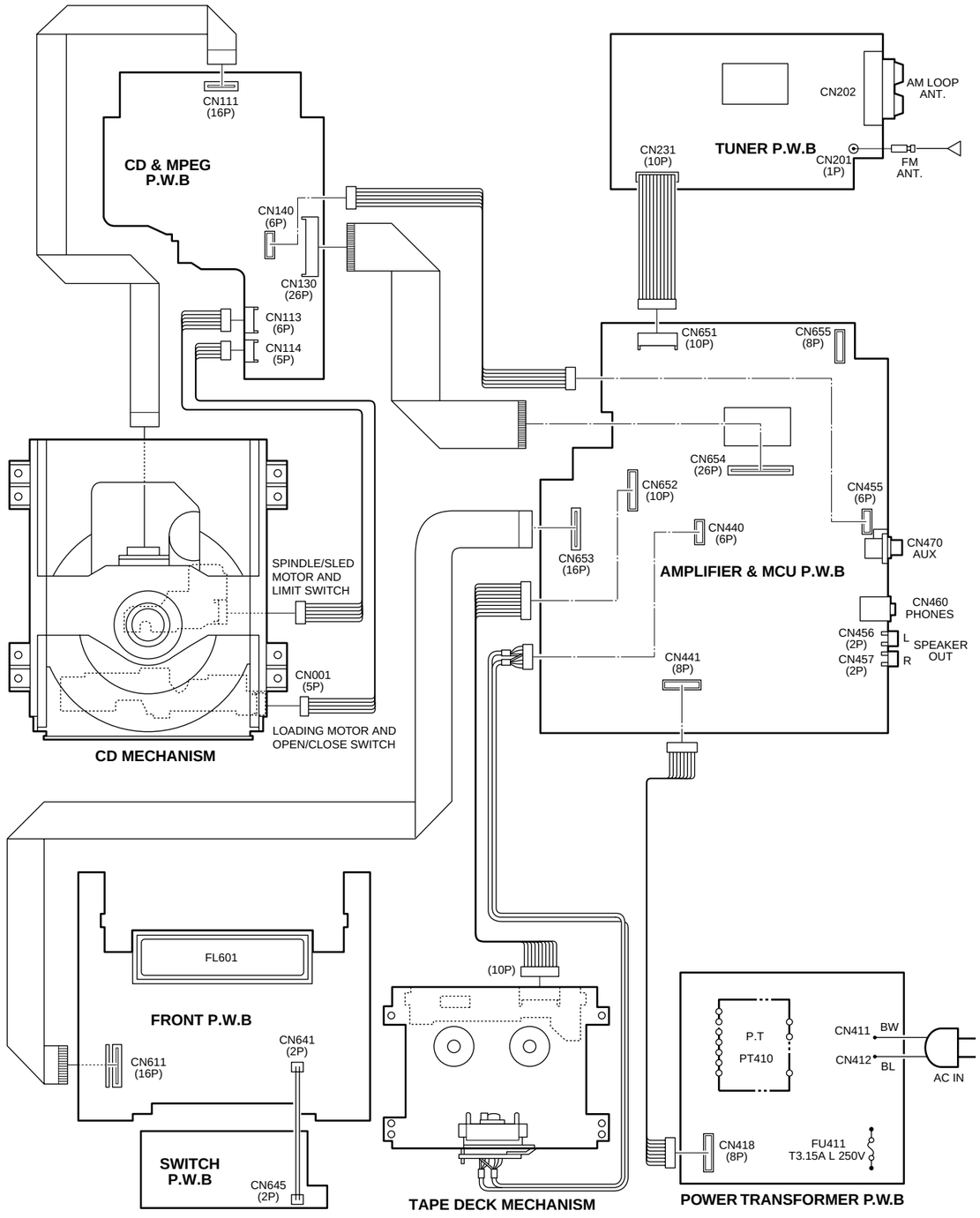


POWER TRANSFORMER P.W.BOARD



This is a basic wiring diagram.

WIRING CONNECTION



This is a basic wiring connection.

SANYO

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Osaka, Japan

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